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TABLE OF CONTENTS.

	PAGE.
Editorial:	
They Only Want to be Let Alone	203
Need of Caution in the Tire Trade	203
Minor Editorials	204
The Passing of the Union India Rubber Company	**205**
The India Rubber Industry in Europe	**208**
Insulated-Wire Manufacture in the United States *Henry A. Reed*	**210**
New Goods and Specialties *(Illustrated):*	
The "Climax" Rubber Elbow	213
Soft Rubber Tip Syringe	213
"Vim Special" Tire	213
Venn's Carton-Marker	213
The Diamond Tread Tire	213
The Flexifort Tire	214
Rubber Tires for Vehicles	214
Parker's Bathing Shoes	214
Hart's Combination Nozzle	214
The "Good" Stopper	214
The Carmichael Rubber Dam Holder	214
A New Hose-Nozzle	215
The Punctureless Tread Tire	215
The Samson Special Tire	215
The Zeta Atomizer	215
Brief Abstracts of Recent Rubber Patents	**216**
The Beginning of the Rubber-Shoe Season	**218**
Recent Trade Publications	**221**
Mackintosh Goods and Other Waterproof Fabrics	**225**
Miscellaneous:	
The Belated Garden-Hose Season	204
A New Type of Rubber Washer	211
Specially Adapted for Rubber Factories	211
Japanese Rubber Imports	211
A Column of Questions	212
European Views of Reclaimed Rubber	212
The Naugatuck Reclaiming Plant	215
Tariff Changes in Canada	220
An Ode to Pará	220
The New Crude-Rubber Companies	223
An Important Deal in Tires	223
The Obituary Record	224
The Messrs. Hodgman Again in Control	224
Two Dinners to Mr. Hayward	226
Successful Rubber Superintendents *(With Portrait of Maurice C. Clark)*	227
Another Receiver at Trenton	227
Printing Water Proof Fabrics	227
India Rubber Matters in Court	228
They Want to be Let Alone	228
April Trading in Rubber Stocks	228
The "A. M. W." Waterproof Dress-Facing	231
Trade and Personal Notes	**229**
Review of the India-Rubber Market	**232**

THEY ONLY WANT TO BE LET ALONE.

CANADA has a new tariff schedule, built up by methods familiar to the people of the United States, including "hearings," both for the benefit of the interests to be affected, and for the information of the parliamentary commission having the bill in charge. In Toronto and in Montreal there were hearings for the rubber-men, and naturally the trade will turn first to the items in the new schedule devoted to India rubber. But, if any great changes are expected, they will be disappointed. The average of the new duties on rubber products does not vary from the old rate by so much as 1 per cent., while the difference in revenue from rubber goods under the new and old schedules would hardly equal the cost of the hearings for the rubber-men, including the expenses of the latter.

We have looked in vain for some of our Dominion neighbors to explain the benefit of all this revision of duties and consequent agitation, and it is easier now to appreciate the remark of one of the rubber-manufacturers who appeared before the tariff commission—that the trade had nothing to ask but to be "let alone." It might be best, however, not to press our Canadian neighbors too closely for an answer to the question of what is the good of their tariff revision. Our own lawmakers are struggling under even a heavier task of tariff-tinkering, the net results of which, when the work is finished, probably will be on all fours with the Canadian tariff legislation. The most pleasing feature, to us, of the tariff *melée* in progress at Washington, is the absence from it of the leaders of the rubber trade. They long ago began to see that the way to do business is to do business, without looking to congress to blaze the path. Like the Canadians, they desire, for the most part, to be "let alone."

NEED OF CAUTION IN THE TIRE TRADE.

THE numerous rubber-men who are making tires should not overlook certain indications which presage a turning-point in the bicycle trade. Not that it will happen this year, perhaps, but it is a simple truism that the present rate of increase in the production of bicycles cannot continue indefinitely. At this rate a very few years more would see a bicycle apiece for every inhabitant of the country, and there must be a considerable element of the population unable either to ride a wheel or to pay for one.

The first suggestion that an era of overproduction is nearing is to be found in a weakening in prices, even earlier this season than last. There were wheels sold at everybody's price in 1896, and more of the same kind of business is to be looked for this year. A second indication is in the recklessness with which some bicycle manufacturers, inexperienced in the exporting trade, are rushing wheels abroad without first having arranged for adequate foreign representation. There is reason to fear that too many of the bicycles thus exported are not of a character to enhance either the foreign demand for our wheels or foreign appreciation of American mechanical skill or business

methods. It is not difficult to understand that bicycles consigned to another continent are worth even less to the manufacturer as assets than consigned bicycles in the hands of agents at home.

The lesson of the situation is that wheels are being made that cannot be sold at a profit, if at all, and that the rubber-man who is not cautious may have reason, in no great while, to envy his competitor who began in time to ship tires C. O. D., even to some bicycle-makers who may have bought freely in the past, and paid their bills. It must be admitted that no other important branch of the rubber industry has ever proved so disappointing to the manufacturers as the tire trade, despite the great consumption and the enormous aggregate of money expended for tires. It was bad enough that mistakes should have been made in the beginning in the choice of materials for tires, and in methods of construction as well, followed by the almost suicidal guarantee policy. If to this be added the indiscriminate opening of accounts for tires for all comers, the inevitable disaster to some houses will make the history of this department of the rubber trade a very somber one, indeed.

There is the making of a great industry in tires—a very great industry—under proper conditions. Bicycles have become essential to modern life, and rubber tires are indispensable to the bicycle, so that a permanent tire industry is bound to exist, so organized as to yield fair profits on the product. But before this can be realized there must be a weeding-out of very many of the bicycle concerns now at work, and the tire-makers of to day will be exceedingly fortunate if none of their number is pushed to the wall with the failures in the bicycle trade.

"SIR HENRY DERING, THE BRITISH MINISTER FOR MEXICO, has given his word as to a 300 per cent. return" on investments in rubber-cultivation in that country, according to the promoters of a $2,000,000 rubber-planting stock company now being "floated" in London. We wonder whether Sir Henry would be liable, in case the shareholders should realize only 100 per cent., for the deficit.

THERE ARE INDICATIONS THAT THE BUSINESS of waterproofing cloth is increasing on new lines, as a result of which a new branch of the rubber industry is coming into existence in this country—proofing for the trade. This is a line which ought, in the proper hands, to become very profitable.

MESSRS. HENRY C. PEARSON AND JOHN R. DUNLAP, of THE INDIA RUBBER WORLD, are in Europe, where arrangements are pending which are expected to make this journal of even more value and interest to the trade.

IT IS WITH REGRET THAT WE LEARN, as these pages go to press, of the death of Mr. J. Francis Hayward, the Boston rubber-man, which occurred suddenly on the afternoon of May 7.

AT the New York cycle-show a census of tires was taken, and it was found that, of the 1204 wheels exhibited, 858 were fitted with single-tube tires. In Boston of the 737 wheels on exhibition, 591 were fitted with single-tube tires. These figures are from the New York *Tribune*.

THE BELATED GARDEN-HOSE SEASON.

WITH few exceptions, the reports from the garden-hose trade, up to date, agree that the season has been phenomenally late in beginning. A letter from Chicago, under date of April 20, said: "Last year, a month before this, the Siegel-Cooper Co., the Fair, and other large department stores in Chicago were moving garden-hose rapidly. This year, up to date, they have not moved a foot." Similar reports have come to hand from Boston and Philadelphia, while New York stores have likewise given evidence that the demand for garden-hose in this locality has been slow in awakening.

"We have never seen anything like the backwardness this spring in the opening of our garden-hose trade," said the New York manager of one large rubber-manufacturing company. "The goods still remain in stock that usually, long before this, have reached the jobbers and dealers. But I tell them out at the factory that the demand may be expected any day."

"We consider the season in garden-hose fully six weeks later than usual," said a salesman for another large factory, who was interviewed on May 5. "We do not think that very large stocks have been carried over from last year, and it would seem that jobbers and dealers should be ordering more liberally. But the tendency of late has been toward closer buying, so that jobbers send in orders for 5000 feet of garden-hose at a time, where they used to send for 20,000 feet at a time."

"The garden-hose trade is very dull just now," said the manager of the third house visited, "but it is on account of the weather. We are selling some hose all the time, and quite a lot has gone out from our house for this season's trade, but shipments just now are very slight. But it would require very few days of warm, dry weather to start a demand everywhere."

One manufacturer was found who had no complaint to make with regard to garden-hose. "We are giving a liberal amount of attention to this line for the first time this year," he said, "and our sales have been quite satisfactory."

Garden-hose is one of the lines which department stores are sometimes charged with slaughtering, thereby drawing patronage away from houses that charge legitimate profits. The department stores in New York do sell large quantities of hose, particularly as they deliver purchases free a hundred miles from the city. "But they don't interfere with the retail rubber stores," an INDIA RUBBER WORLD man was assured in one of the latter. "Look at department-store prices: 25 feet for 85 cents; a 'special quality' in 25 feet lengths, $1.50; special wired hose, 25 feet for $1.75; and so on. Of course we cannot compete with these prices. We don't want that kind of trade. The buyers of such hose may get their money's worth, but not more. But we have a fair share in supplying the trade that demands a good hose and does not look for bargains."

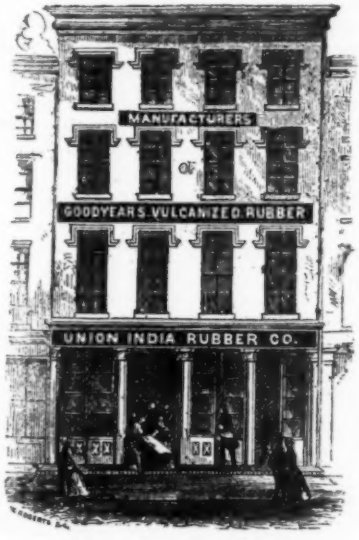
"The season is rather late in garden-hose," was heard in one department store, "but not more so than in other season goods this spring. Lawn-mowers, ice-cream freezers, and a long list of other things have been very late in becoming active sellers this spring. Still, we are constantly making sales."

"The use of garden-hose in New York city is gradually dying out," said a retail rubber-goods dealer who formerly had a good local demand for it. "The constantly-increasing restrictions on the use of water in this city have discouraged the use of hose, until it has come to be employed mainly in stables. People who can afford stables usually have places in the country, and they buy hose from us to take out of town. Buyers of this class do not go to the department stores for hose, so that we still do some business, though surrounded by these big establishments."

THE PASSING OF THE UNION INDIA RUBBER COMPANY.

A LONG and interesting chapter of rubber history will end soon with the voluntary dissolution of the Union India Rubber Co. This was one of the earliest corporations formed under the general manufacturing law of New York, and resulted from the consolidation of the old Harlem and Naugatuk factories and the business and franchises of Jonathan Trotter, of Brooklyn. The date of the charter was August 22, 1848. The trustees named for the first year were Jonathan Trotter, Elihu Townsend, Nicholas Dean, William Rider, and Emory Rider, the latter four being residents of New York city. The original time limit was twenty years and the capitalization $250,000. Four-fifths of the stock was issued for patents, licenses, and merchandise, and the remaining $50,000 as preferred shares for cash. The life of the charter was extended, and the capital increased until it reached $400,000, after which it was gradually reduced to the present figure, $80,000. The Union company ceased manufacturing a dozen years ago, and their business has been continued by the Goodyear Rubber Co., founded by kindred interests, who still use the Union trade-marks.

The Naugatuck India Rubber Co. was a joint-stock corporaion formed under the laws of Connecticut, in 1844, on the advice of Charles Goodyear's counsel, Seth P. Staples, one of the most astute lawyers of his day. Goodyear's financial troubles were so great as to threaten to deprive him of any benefit from his great vulcanization patent. When a debtor's person could be seized by his creditors, any income which he might have from patents could easily, under ordinary circumstances, be wrested from him. Under date of July 18, 1844, Goodyear transferred his rights to this friendly corporation, on conditions which protected him in a measure from merciless creditors. A building before occupied as a button-factory was secured, and the original manufacture of vulcanized rubber goods was begun. Emory Rider was connected with the factory management in the beginning, and financial assistance was rendered by Goodyear's brother-in-law, William C. De Forest.



THE NEW YORK STORE IN 1854.

It was specified in the license granted to the Naugatuck company that, in case any offer should be received by Goodyear from outside parties for the right to use the vulcanizing process for a specified purpose, the company should have the privilege of retaining the full right by paying to Goodyear the amount of such offer. But should the Naugatuck company elect not to meet such offer, it could be accepted by Goodyear, the Naugatuck company giving its consent in writing. By means of this arrangement a number of companies came into existence, manufacturing rubber goods under licenses from Goodyear—approved by the Naugatuck company—the result of the contracts being, as was intended, to protect Goodyear more fully in the control of his income.

This arrangement made the connection of Charles Goodyear closer with the Naugatuck and Harlem factories than with any other, and his experiments in them in developing the use of rubber for a great variety of purposes resulted practically in making these factories training-schools for the education of skilled workmen in the rubber business. A number of other companies were started by men who went directly from these factories. Thus Charles B. Hotchkiss, who was superintendent first at Naugatuck and then at Harlem, went to France and organized factories there. Jared H. Canfield also went from Naugatuck to France, after which he returned and established the Canfield Rubber Co. Jonathan T. Trotter, a nephew of Mayor Trotter, the superintendent at Harlem, was called several times to Europe to advise concerning the starting of factories in England and Germany. The St. Petersburg factory, in Russia, was also started by American workmen. Isaac F. Williams, from Harlem, organized the factory of what is now the National India Rubber Co., at Bristol, R. I., and was joined later by Andrew R. Trotter, also from Harlem. Many other factories secured skilled workmen from the Union company's factories. It may be added that the hard-rubber industry also had its beginning in them.

In the fall of 1845 the Rider brothers, William, Emory, and John, formed a co-partnership in New York, for the manufacture of rubber goods, occupying a building on Fourth avenue, between 128th and 129th streets (Harlem), which had been erected in 1837 for the carriage-making business of John Stephenson. Under date of March 28, 1847, one of the Goodyear licenses above referred to was granted to W. Rider & Brothers to manufacture rubber mail-bags. Another license, dated July 1, 1848, covered the manufacture of army and navy equipment, druggists' goods, and sundry other articles under the vulcanization patent. The same license granted a similiar privilege to Jonathan Trotter, of Brooklyn, N. Y.

Trotter was a native of Newcastle-on-Tyne, England, where he mastered the business of dressing fine leather, which he transferred to America. Settling in Brooklyn, he became so much interested in the development of that town as to lead to his election as its first mayor when it became a city. In the end, however, his fortune largely disappeared in his real-estate transactions. Mr. Trotter became deeply interested in the subject of the rubber industry and on February 5, 1847, obtained a license for the use of Goodyear's patent in the manufacture of all kinds of wearing apparel, except boots and shoes. He manufactured some goods in Brooklyn.

At the time of the organization of the Union India Rubber Co., Jonathan Trotter was the treasurer of the company at Naugatuck, and in close relations with the Rider brothers, which rendered the consolidation an easy matter. On November 21, 1848, the Union India Rubber Co. opened a store at No. 19 Nassau street. On December 4 contracts were drawn transferring to it the several licenses above referred to, with the consideration in each case as follows:

License of July 18, 1844—Goodyear to the Naugatuck India Rubber Co., general license	$50,000
License of February 5, 1847—Goodyear to Jonathan Trotter, for wearing apparel	25,000
License of March 28, 1847—Goodyear to W. Rider & Brothers, for mail-bags	20,000
License of July 1, 1848—Goodyear to Jonathan Trotter and W. Rider & Brothers, for army and navy equipment, etc.	45,000

The result of this combination was very largely to concentrate the manufacture of rubber goods, with the exception of boots and shoes, belting, packing, and hose. The cash capital already mentioned, amounting to $50,000, was subscribed largely by James Bishop, of New Brunswick, N. J., and New York, a shipping merchant engaged in the importation of India-rubber. The Union India Rubber Co. was organized for business with Jonathan Trotter, president; William Rider, treasurer; and

THE ORIGINAL NAUGATUCK FACTORY.

F. W. G. Bellows, secretary. The succession of officers has been as follows, with the date of first election:

PRESIDENTS.

	Elected.		Elected.
Jonathan Trotter	1848	Warren Ackerman	
James Bishop	1851	William W. Pinneo	1868
Jacob G. Van Deventer	1852	Warren Ackerman	1870
D. M. Wilson	1853	Amzi Dodd	1871
Henry G. Hadden	1857	Frederick M. Shepard	1876

SECRETARIES.

F. W. G. Bellows	1848	Charles C. Runyon	
Nicholas Williamson	1851	W. G. Vermilye	
Frederick M. Shepard	1853	William Hadden	
Daniel C. Whitman	1857	A. M. Putnam	
Joseph A. Minott	1876		

The office of treasurer was combined with that of secretary upon the election in 1851 of Nicholas Williamson, and the two offices have since been filled by one person. Williamson, by the way, was a brother-in-law of James Bishop, and afterward became prominent in the rubber industry in New Jersey.

The Union India Rubber Co. came upon the scene at the right moment to take advantage of the earliest important development of what has become a great industry, and well did they improve the opportunity. First began the emigration of the "forty-niners" to the Pacific coast, with whom waterproof garments, boots, and other articles were immensely popular. It is asserted that at one period the demand for goods was so great that the doors of the store at No. 19 Nassau street had often to be closed against customers. When they were reopened only so many people would be admitted as could be attended to conveniently, while others in waiting had to content themselves on the sidewalks. Nor could the factories meet the demand for goods.

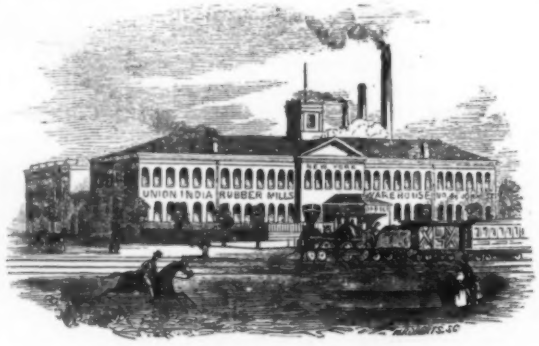
The war of the rebellion afforded another great opportunity in the way of supplying army blankets to the government. While the manufacture of army blankets was centered at the Harlem mill, the facilities of other factories had to be drawn upon. The company's factory at Naugatuck had been burned some years before, and they had ceased operations there, but a new building was now erected upon the ruins, and a corporation was formed under the name of the Phœnix Rubber Co., which manufactured blankets until the close of the war. An interest in this was held by John H. Chelver and Henry F. Durrant, proprietors of the Beverly Rubber Co., manufacturers of rubber clothing at Beverly, Mass., whose factory had then lately burned down. The Boston Rubber Shoe Co., and the Newark India Rubber Manufactory Co. also made large quantities of blankets under license from the Union company, while several companies which entered into their manufacture in infringement of the Union company's license were proceeded against successfully in the courts. This was notably true in the case of the Providence Rubber Co.

Some idea of the magnitude of the army contracts may be gained from the fact that when the war came to an end, in April, 1865, there had been manufactured for the government, after July 1, 1864, no fewer than 625,624 rubber blankets and 710,979 rubber ponchos, at a cost of $6,296,876.33. Most of this equipment was still in stock when the war came to an end, and although the goods were afterward supplied liberally to the army, it was necessary during the next thirty years for the war department to buy very few rubber blankets or ponchos. After the war, some twenty years, the government sold a large number of the blankets at public auction, which were bought by the Union Company. They are said to have come out of the cases in as good condition as when they were first put in.

There was one opportunity for business which the Union company refused to take advantage of. It is related that, after one large order for rubber blankets had been filled at the factory, and the goods were ready for shipment, the management learned that they were intended for the Confederate army, and the shipment was stopped. The company would never consent to supply the southern soldiers with equipment.

The manufacture of rubber boots and shoes was undertaken by the Union India Rubber Co. only after the war, when they succeeded to the business of the Newark India Rubber Manufacturing Co., and for several years they were large producers of footwear.

In 1885 the Harlem factory was closed partly because of dissatisfaction at the methods of the labor-unions and because of the conviction that the time had passed when rubber goods could be manufactured in New York city in competition with the products of mills in smaller towns, where the cost of living was cheaper. By this time the president of the company was Frederick M. Shepard, who had retired from its service in 1857 to found the Rubber Clothing Co., which constantly did a large



THE OLD FACTORY IN HARLEM.

business in the sale of the Union company's products. This company still continues in connection with the Goodyear Rubber Co., organized in 1872 under Mr. Shepard's presidency. These companies controlling various factories and branch stores, have continued the rubber business of the Union company, which has now no longer a reason for corporate existence. The corporation still has assets of value in the shape of real estate, covering the whole block bounded by Fourth and Lexington avenues, and 131st and 132d streets, New York, the value of

which greatly exceeds the par value of the company's capital shares. This property is shortly to be disposed of.

The catalogue of the Union India Rubber Co., printed in 1854—a pamphlet of 84 pages, 3″×4¼″—states that they are "the sole manufacturers, under Goodyear's patent, of *all kinds of clothing*, enamelled and plain carriage-cloths; plain and colored cloths; printed, piano, table, and stand covers; life-preservers; air-beds; pillows; cushions; tents; water-tanks; pails; fire-buckets; hose; and gas-tubing; *all kinds of druggists' articles*, breast-pumps, nipple-shields, teething rings, syringes, water-bags, bandage-rubber, etc." But while holding so important a position in the trade, the company's consumption of rubber in their earlier years, was very small, measured by modern standards. The figures were, for three years:

In 1854..... 140,000 pounds.
In 1855..... 158,000 pounds.
In 1856..... 295,000 pounds.

In July, 1855, they paid for fine Pará rubber, 40 cents; for medium, 32½ cents; and for coarse, 25 cents. During 1856 the price of fine Pará ranged between 40 and 46 cents, and coarse cost 33 cents. They used a considerable percentage of Java rubber which cost 17 cents.

The illustrations herewith consist, first, of the Union India Rubber Co.'s second store in New York, at No. 41 John street, as it appeared in 1854; second, a view of the Naugatuck factory, as it first appeared after being occupied by the Union company; and, third, the Harlem factory as it appeared forty years ago. The latter was afterward burned and the site is now occupied by a brewery.

It may interest selling-agents of the present day to see a list of the contracts for rubber blankets and ponchos made with the United States war department, for army equipment, for a single year. The year chosen is 1864, and the details given below are compiled from the records of the quartermaster-general at Washington. The initials preceding the dates of the contracts indicate the cities at which the goods were to be delivered, as follows: *C* for Cincinnati; *N* for New York; and *P* for Philadelphia. It will be seen that the greater number of the contracts were made by the Union India Rubber Co., including the Phœnix Rubber Co., as above explained. The details follow:

UNION INDIA RUBBER CO.

C—Apr. 8—100,000 poncho tent blankets @ $2.75	$275,000
P—Jun. 29—10,000 blankets @ $3.35=$33,500; 40,000 blankets @ $3.41=$136,400; 10,000 ponchos @ $4.65=$46,500; 10,000 ponchos @ $4 75=$47,500	263,900
P—Jun. 29—25,000 tent blankets @ $3.56	89,000
P—Jul. 26—15,000 infantry tent blankets @ $4.81	72,150
C—Aug. 29—50,000 poncho tent blankets @ $5.60=$280,000; 35,000 ditto @ $5.45=$190.750	470,750
C—Sep 23—65,000 poncho tent blankets @ $5.45	354,250
P—Oct. 10—10,000 blankets @ $4 68=$46,800; 60,000 blankets @ $4.78=$286,800; 10,000 ponchos @ $6 30=$63,000; 60,000 ponchos @ $6.40=$384,000	780,600
C—Dec. 19—100,000 tent blankets @ $5.20	520,000
[Contract made by S. Myers Hurlburt.]	
C—Dec. 10—50,000 tent blankets @ $4.75	237,500
Total	$3,063,150

PHŒNIX RUBBER CO.
[Branch of the Union India Rubber Co.]

N—Feb. 22—92,000 blankets @ $2 55=$234,600; 40,000 blankets @ $2.80=$112,000	$446,600
C—May 19—50,000 poncho tent blankets @ $2.80	140,000
N—Aug. 13—40,000 blankets @ $5	200,000
P—Oct. 10—25,000 blankets @ $4.75	118,750
C—Dec. 19—50,000 tent blankets @ $5.25	262,500
Total	$1,167,850

PROVIDENCE RUBBER CO.
[By A. O. Bourn, Treasurer.]

P—Jul. 26—50,000 infantry tent blankets @ $4	$200,000
N—Aug. 13—50,000 blankets @ $5	250,000
P—Aug. 26—35,000 infantry tent blankets @ $5.70=$199,500; 15,000 calvary ponchos @ $7.60=$114,000	313,500
P—Oct 10—50,000 ponchos @ $6.29	314,500
[Contract made by Levick & Pasen.]	
C—Apr. 8—100,000 poncho tent blankets @ $2.72	272,000
Total	$1,350,000

GOODYEAR'S INDIA RUBBER GLOVE MFG. CO.

C—Dec. 17—10,000 tent blankets @ $4.19	$41,900

GUTTA-PERCHA AND RUBBER MFG. CO.
[By Warren Lazell, President.]

P—Jul. 26—25,000 gutta-percha tent blankets @ $4.29	$107,250
P—Aug. 26—10,000 infantry gutta-percha tent blankets @ $5.50=$55,000; 10,000 cavalry gutta-percha ponchos @ $7.30=73,000	128,000
C—Aug. 29—25,000 gutta-percha blankets @ $5.40	135,000
Total	$370,250

The Providence Rubber Co. were sued by the Union India Rubber Co. for infringement of the Goodyear patent, under which the latter claimed to enjoy exclusive rights. The Providence company, on the other hand, claimed to have the right to make army equipment under an early license granted by Goodyear to Edwin M. Chaffee. They failed, however, to establish this defense in court and award was given to the Union India Rubber Co., of the whole amount of profits made by the Providence company on their army contracts, which reached over $600,000 on the above and a few other contracts. The money was actually paid over which practically gave the Union company a monopoly of the profits on India-rubber blankets supplied to the army. As for the Gutta-percha blankets, they were not in a position to offer any protest.

One more statement may be given from the records of the quartermaster-general's office. It relates to the total number of rubber blankets and ponchos purchased for the army between May 1, 1861, and June 30, 1865, as follows:

	Blankets.	Ponchos.	Total.
Cincinnati	210,000	809.755	1,019,755
New York	723,700	254,525	978,225
Philadelphia	959,307	532,279	1,491,586
Total	1,893,007	1,596,559	3,489,566

During the earlier years of the war some of the blankets and ponchos bought by the government were of the class described as "painted," instead of being rubber. Of the quantity of this class nothing is now known, but the "painted" goods are included in the table above.

Two more items of India-rubber army-equipment contracts during 1864 remain to be noted: John Rider, March 5, for 7640 Gutta-percha knapsacks, at $2.09½ each, or $16,005.80; and Joseph Lea & Co., May 25, for 500 rubber-lined canvas wagon-covers at $17.90 each, or $8950.

During the war the Union India Rubber Co. also manufactured for the government large numbers of rubber pontoons, but no details concerning them are now available.

THE Silvertown works of the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, are described by a recent writer as the largest of the kind in the world. They cover a space of very nearly twenty acres and employ between 2000 and 3000 hands. He was conducted personally by the manager, Mr. C. H. Gray, who stated that the company were experimenting with a new bicycle tire which promised to be faster, by 100 yards in the mile, than any tire now in use.

THE INDIA-RUBBER INDUSTRY IN EUROPE.

A LEADING GERMAN RUBBER FACTORY.

AT the time of giving a report of the recent Berlin industrial exhibition, it will be remembered, THE INDIA RUBBER WORLD made special mention of the interesting display of the United Berlin-Frankfort India Rubber Co. Some information which has since come to hand respecting this important German concern may prove of interest to the trade elsewhere. The Berlin works are among the oldest in that country, having been founded by an Englishman, Mr. Elliot, in 1849, on the banks of the Spree. Built on a small scale at that date, the works changed proprietors several times and were finally turned over into a stock company under the name of Berliner Actien-Gummiwaarenfabrik. In 1886 the mills in Berlin joined with that of a renowned private India-rubber factory in Gelnhausen, near Frankfort, o/M., under the style of the United Berlin-Frankfort India-Rubber Co., Limited, and from that date the works have gradually risen to their present important position. Doing a big export trade to Austria, and changes of tariff threatening to take the trade away, the company built a mill—their third—at Grottau, in Bohemia (near the Saxon frontier), in 1892.

The three mills together employ about 700 people. The capital of the company is 1,500,000 marks in shares, and 750,000 marks in first-mortgage debentures. The shareholders for years have received an annual dividend of 8 per cent. The head manager of the Berlin mills is Mr. Emil Spannagel, who lived several years in the United States, beginning his commercial career in the well-known dry-goods commission house of Spielmann & Co., in New York, where he has many friends. Having traveled the world over, he is conversant with most modern languages, and with the business methods of many lands. He is assisted by Mr. Hagelsieb, who has rendered excellent services to the company during almost thirty years at the head of the office and financial department, while Mr. Neumann skillfully handles the technical works. The Gelnhausen mill, an important shoe factory, is under the management of Mr. Eduard Brendle, who formerly was at the head of a noted clock factory in the black forest. The Grottau mill is prospering under the guidance of Herr Director Friedrich Hüber, who about twenty years ago entered the company as office-boy and by energy and hard work has risen to his present prominent position. The firm doing a big export trade all over the world, have lately opened a branch office in London, in Basinghall street, with Mr. Charles Poppe as active manager.

In going through the catalogues of the firm one is surprised at the variety of goods turned out. Practically all classes of articles are represented. The huge suction-tube, of 20 inches in diameter, made specially for Krupp's gun factory, which created such a sensation at the last Berlin show, shows the same perfection in workmanship as the elastic air-brake hose which the firm supplies to the leading railway companies of Europe. During the season about 200 men are working day and night to turn out the elegant and stylish lawn-tennis shoes made by the company. Their huge India-rubber rollers are as highly appreciated by the paper factories as the patent hard-rubber automatic pump is by the chemical factories for transmitting acids. In the surgical department forty girls are employed in turning the finest cut sheet rubber into many useful articles for the hospitals and nurseries. The bicycle-tire department of late has taken such a sudden rise that a large four-story building has had to be added to the mills in Berlin. The company's "Elliot pneumatic" is getting more and more popular in Germany every day, and during the season the firm can hardly supply the demand. Bottle-stoppers of ebonite and porcelain with rings and codd rings are turned out by the millions. Several thousands of the "Isolde" wringer-rollers leave the factory every year. The rubber erasers made here command a large sale, and last but not least, truck-loads of baby pacifiers, with or without music, bring comfort and peace to numberless homes in the old world and the new.

A NEW RUBBER-SHOE FACTORY IN GERMANY.

THE German Rubber and Gutta Percha Co. (formerly Volpi & Schlüter), of Berlin, began in November last the manufacture of rubber shoes. It is claimed that the product is equal in style and quality to the Russian and American goods, although the prices to the wholesaler are lower than those of the foreign concerns. It is also asserted that already a market at home and abroad has been secured for the whole output, and that the demand for the goods is growing.

The building in which this factory is located was commenced in March of last year, and great energy and application were needed to set the machinery in motion in five months. The building is of three stories, having windows on two sides, and is fitted advantageously for the business, and for the comfort and sanitary requirements of the employés, both men and women. In the spacious basement are the fireproof storerooms for raw material, of which a large stock is carried. On the ground floor are placed the rubber washing and mixing machines, drying apparatus, etc., all fitted for power. Adjoining is a room containing the retorts for burning lamp-black, a varnish room in which varnish is made, and a shoe-sorting room. Connecting with the last named room is one containing two vulcanizing-ovens each with a capacity of 500 pairs of shoes. For vulcanization which is done at a temperature of 100° C (=180° F.) the shoes are placed on light iron lasts and then arranged on a specially constructed car, running on rails into the vulcanizing-ovens. Each car will accommodate 400 shoes.

On the first floor are situated the cutting-rooms which contain stamping machines. Beyond a partition last cutting is done. Here also the lasts are stored systematically on frames containing a description of the size and style of each kind of last. In the second story are the workrooms where the shoes are put together ready for vulcanization and varnishing. Each room is fitted for 100 female operators. On long tables the frames for the reception of lasts are placed, each frame being provided with movable slats fitted for eight lasts. When eight lasts are covered—*i. e.*, when rubber shoes have been worked on them—they are placed on the shoe-cars, standing at intervals all over the workroom on a railway, and when these are loaded they are taken by an elevator to the first story to the varnish-room.

The department for making rubber shoes even to the manipulation of the crude rubber is entirely independent of the other departments where rubber goods have been made by the company since 1871. The machinery and interior outfit were made by F. Schwabenthan & Co., Berlin. The manufacture of rubber shoes is done under the supervision of a manager obtained from a large shoe factory in Russia; he brought foremen and forewomen with him in order to teach the new working force. The whole is superintended by Director Ewald Schmidt, who expects to turn out in the near future 2500 pairs of shoes per day.

PROFITS OF SOME ENGLISH COMPANIES.

AT the thirty-third ordinary general meeting of shareholders of the India-Rubber, Gutta-Percha, and Telegraph-Works Co., Limited, held at the Cannon Street Hotel, London, on February 25, it was reported that, after making allowances for doubtful debts, the net profit for 1896 amounted to £51,888 17*s.* The directors recommended a dividend of 7½ per cent., which, with the *interim* dividend paid in July last, amounted to 10 per cent. on the year's business. The amount carried forward was £22,128 6*s.* 4*d.*, against £20,239 9*s.* 4*d.* carried forward from 1895. The company's general business showed a steady increase during the year, but their cable department and steamships were only moderately employed. The capital of the company is £500,000, and the £10 shares are quoted on the London exchanges at £21@£22 per share. The company's first-mortgage debenture issue now stands at £300,000, bearing 4 per cent. interest. The £100 debentures are quoted at £106@£109. The company's net profits for four years past have been:

In 1893	£94,607,4.2	In 1895....	£94,714
In 1894.....	£41,961,15.9	In 1896.....	£51,888.17

The Telegraph Construction and Maintenance Co. will pay 15 per cent. on their capital from the business of 1896, being the same figure as for 1895. Their profits for the year, after charging interest on debentures, amounted to £88,300, which is regarded as a very good showing. Their capital now amounts to £448,200. The amount carried over to the account of 1897 is $39.940. They have lately received an order from the Japanese government for 250 miles of submarine cable.

W. T. Henley's Telegraph-Works Co., Limited, report a net profit on the business of 1896 of £26,077 5*d.*, leaving, after paying interest and income tax, and allowing for depreciation, £20,527 5*d.* The disbursements of dividends for the year amount to £12,100, being 7 per cent. on £30,000 of preferred shares and 10 per cent. on £100,000 of ordinary shares. The dividends on the ordinary capital in 1895 amounted to 8 per cent. The amount carried forward this year is £14,294 6*s.* 7*d.*, against £13,894 6*s.* 7*d.* last year.

The Liverpool Rubber Co., Limited, have declared a dividend of 5 per cent., making, in connection with the *interim* dividend paid in July last, 7½ per cent. on the business of 1896. They bring forward to the account of the new year £10,722 17*s.* 3*d.* The company paid the same dividend in 1894 and 1895, this being regarded as equivalent to 10 per cent. on their capital as previously rated. The company date from 1859 and manufacture rubber shoes and mechanical rubber goods.

GOOD BUSINESS IN SWITZERLAND.

THE trades report of Switzerland for 1896 makes an especial mention of the manufacture of elastics, as follows: The uncommon fall in the prices of cotton and woolen yarns, as well as of silk, depressed the prices of manufactured elastic goods at the beginning of the year to a degree which has seldom been experienced. In spite of their cheapness the indication of a normal consumption was very weak. With the first month of spring a novelty appeared which carried life into the industry, in the shape of a rubber belt or girdle for ladies. This article was made, soon after its introduction by the Swiss manufacturers, both plain in widths from 8 to 14 centimeters, (equal to about 3⅛ to 5½ inches) and beautifully ornamented, elastic and durable. From the beginning these belts, being stylish, brought fair prices, the demand for them increasing with the advancing season. Many manufacturers fitted a large part of their factories for this work, relieving the manufacture of shoe elastics to a large extent. The market place of shoe elastics has shifted but little. In Spain, the principal foreign consumer of these Swiss goods, trade has been depressed by the general apathy in business and the low rate of exchange, as well as by home competition. The trade with the Balkan states and the Orient, on account of the existing political uncertainty, has diminished very much and in some cases has been abandoned entirely.

THE RUBBER INDUSTRY IN RUSSIA.

PROGRESS continues to be the law of the India-rubber industry in Russia. It had a beginning soon after 1830, but the first real impetus was gained about 1860, since which time the advancement has been very rapid. A single company —the Russian-American Rubber Co. (St. Petersburg)—as long ago as 1891, manufactured 4,675,000 pairs of "galoshes," or overshoes, together with other products, and it is reasonable to suppose that the output has continued to grow. Its capital and reserve funds at that time amounted to $4,620,000. There are several other factories in Russia producing rubber shoes and the export trade in these articles is becoming very large. The following table exhibits the growth in this trade since its active beginning, nine years ago:

EXPORTS OF RUSSIAN GALOSHES.

To—	1888.	1895.
Germany.....pairs	326,016	2,583,936
Denmark.....	16,560	60,480
Holland.....	7,344	720
Belgium.....	5,472	12,816
France....	.....	41,328
Total.....	355,392	2,699,280

From January 1 to July 31, 1896, the export of galoshes from Russia amounted to 1,944,720 pairs, of which 1,354,900 pairs went to Germany and 15,000 pairs to France. These goods are packed in cases of 144 pairs.

The Austrian rubber trade in the past have looked forward with much interest to the development in Asia Minor of an important outlet for their products. But the consul-general of Austria-Hungary at Smyrna, in a recent report, takes a far from favorable view of the situation. He says, for instance: "In 1895 our India-rubber galoshes were far outdistanced by cheap English and American lines which are said to be superior to ours in quality. Russia, which has also begun to compete within the last few years, has quickly acquired a firm footing, thanks to strongly-made, moderately-priced goods; in time that country will monopolize a large share of the trade."

The electrical industry in Russia is treated at length in *L'Electricien* (Paris) by B. Ougrimaw, who touches upon the progress which has been made in that country in the insulation of electric wires. As recently as 1890, he asserts, there had not been manufactured in Russia one meter of electric cable insulated with Gutta-percha or vulcanized India-rubber, and especially was this true of submarine cables. All such material required in Russia was imported from France and Germany. But at the great fair last year, at Nijni-Novgorod, exhibits were made of all these types of wires, of Russian manufacture.

AMERICAN RUBBERS IN EUROPE.

THE selling-agency for Europe of the rubber boots and shoes made by the Woonsocket Rubber and Goodyear's India Rubber Glove companies is in charge of John Rye, 46 Aldersgate street, London. Recently the sub-agency for these goods for Vienna and southeastern Europe has been taken by Henry Royston & Co., London merchants and shippers, who have offices in Franz Joseph quai, Vienna. Mr. Rye has been sued by the Boston Rubber Shoe Co., to restrain him from using the word "storm" as applied to overshoes, this having relation to what are known as "storm slippers."

INSULATED-WIRE MANUFACTURE IN THE UNITED STATES.

*By Henry A. Reed.**

THERE was little demand for high insulation in this country prior to 1882, except for subaqueous telegraph cables. I think that the only wires underground at that time were in a cable between the New York Stock Exchange and the Western Union main office. Those wires were insulated with Gutta-percha, made into a cable and drawn through long logs bored like old-fashioned wood-pumps. Up to that date nearly all of the river cables had been made by the Bishop Gutta Percha Works, being insulated with Gutta-percha.

For several years prior to the first appearance of the *Electrical Engineer* A. G. Day had been making a good quality of rubber-insulated wires which were very generally used for leading from telegraph offices to the first pole, and for a very few inside cables. The inside wires were generally what are still known as "office wires," being insulated by cotton braid saturated with paraffine. Day had made a few river cables which were quite satisfactory, but people were better acquainted with Gutta-percha and bought it.

The same conditions which at about this period (1882) seemed to make room for another electrical journal created a demand not only for more insulated wire but for greater variety, and higher average quality. The telephone, which had been publicly exhibited less than six years prior to your birth and was for some time considered by the public only a clever toy, had shown its capabilities to a large extent and business men felt that they must use it or be behind the age. To explain or even to mention the various experimental cables made to meet only partially-understood requirements of this new-comer, would extend this article far beyond reasonable limits, but I will say that the man or woman who first suggested "twisted pairs" should have been well rewarded here and given a free pass to telephonists' heaven.

Up to 1882 electric lighting had been almost entirely by arc lamps with wires on poles. I believe that the first underwriters' wire was made by W. W. Marks, the first superintendent of the Bishop works. He covered the wires with three successive braids of heavy cotton, each coat thoroughly saturated with white-lead paint, which had lead in it. Each successive coat was compressed and the last braid had two or three coats Some of this first wire is still doing duty and may continue for several years, but somebody discovered that dirt was cheaper than lead and very soon the so-called underwriter's wire was correctly named undertaker's wire. People lost faith in paint and went for rubber with a rush.

The rubber field was inviting, and made more so by the introduction of steam-pipes in the streets which rendered Gutta-percha useless in their vicinity. Hotchkiss, the enterprising agent of "kerite," made a good deal of hay in the shine of electricity, but soon Grimshaw came from England with his patent hook well baited. Brother Gallaher got hooked, but being amphibious he managed to live after being landed, and soon learned to make good rubber insulation which he called "Grimshaw" in memory of the hook, although it was not made *à la* Grimshaw. He formed the New York Insulated Wire Co. in 1884. He has done a great deal of good work and still remains in the hottest of the fight, showing few scars.

A little later "okonite" insulation came, claiming a mysterious origin and a more mysterious composition. Both origin and compound seemed dark, and they have always chosen dark backgrounds; but their stuff had virtue in it, and big pushers behind it and for many years, especially in the west, the cry was: "If ye blows for Candee, ye drinks mit me."

About the time that Gallaher and Candee were getting into shape, Dr. Habirshaw and the intrepid Requa were pulling together, trying hard to make something that was cheap and good. They seem to have got discouraged on the lines they were pursuing and struck rubber. The concussion was so heavy and the rebound so great that they went in different directions, never to meet again; but they both got into the swim. Habirshaw called his company "The Gutta Percha and India Rubber," which is half true, and that is more than can be said of most rubber claims. His "red-core" insulation is, rightly held in high esteem and he is one of the ablest men in the business. Requa pulled a strong oar till he got into "Safety," and is now the highest roller in the lot.

Up to 1885 the Bishop company's motto was "Nothing like Gutta-percha," and there are still a few people who don't like "Bishop wire" because it softens in the sun.

Mr. Bishop having died July 4, 1872, on the same day as ex-President Adams, the business was conducted by Superintendent Marks for the widow until her death in 1881, and for her executor until 1885, and was therefore continued in the old tracks until the latter year, when the present company was organized, and no important changes were made in the work until 1887, when the present manager was given charge.

Having been in telegraphy for sixteen years and for several years engaged as expert in the "Simpson-Colgate insulation" patent suits, he was supposed to be posted on insulation in general. He also went for rubber, selecting as the best type then extant, the celebrated "Hooper's white core," which had done good service for many years in telegraph work in England and India, and had stood satisfactorily the fogs of the former and the burning sun of the latter. While using rubber, pure and compounded, for electric-light work and all places exposed to great heat, this company still recommends Gutta-percha for submarine cables and claims that for flexible cords its "Balata" is up top.

Besides the five companies mentioned above, there are at present eleven more, some being large and strong, sixteen in all, making rubber insulated wire.

Where $200,000 would probably have paid the cost of all high insulated wire and cables made in this country in 1882, the sales last year are estimated at about $5,000,000. A very large portion of this was for underground work for electric light and for electric-railway feeders.

I believe that the first cables to successfully carry high tension currents underground were made by the Bishop company and placed in conduits in One hundred and twenty-fifth street and in Broadway and Fourteenth street, New York, in the spring of 1888, and that they are still working. They were insulated with three coats of rubber; the one next the wire containing no sulphur; the compound of the other three coats contained 3 per cent. sulphur for flexible vulcanization. The rubber was protected by rubber tape and encased with lead. Nearly all of the successful cables in use to-day for high voltages are similar in construction. The Standard Underground Cable

* Reprinted from *The Electrical Engineer* (New York), XXIII, 27–28. The author is the secretary and treasurer of the Bishop Gutta Percha Co., the pioneers in the use of Gutta-percha in the United States.

Co., the Western Electric Co., and some others, have made for several years large quantities of telegraph, telephone, and signal cables by saturating the cotton-wound wires with hot paraffine, bittite, rosin, wax or pitchy compounds encased in lead. These answer well for low-tension currents as long as the lead holds.

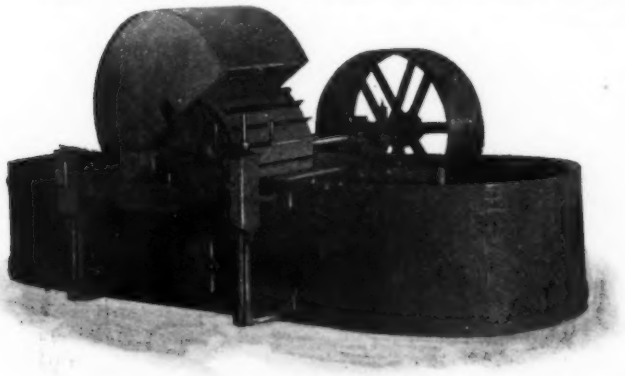
Paper cables with rosin oil as an insulator have been made by several parties and, being cheap with high insulation, are much used; but they also depend upon the lead to keep their feet dry. The best working telephone cable for underground work is insulated by dry paper wound around the wire in such manner as to leave room for as much dry air as possible. Telephone currents stick pretty close to their tracks, not being coaxed off by poor conductors, but want some room for flourishes, which Gutta-percha and rubber does not allow them.

One of the thorns in the sides of insulated wire men has been the architect who knows nothing of electricity and the electrical engineer who knows less about insulated wires. This has been largely remedied recently by certain competent engineers, who have made a special study of insulation, and now our main trouble is the dirt craze.

Pure rubber is a higher insulator than Gutta-percha, but not so easily applied to the wire. Fortunately it is able to carry a large amount of adulterant, which renders it more tractable and much cheaper. I believe that a large portion of the people who are insulating wire with rubber compounds, can make good stuff and would do so if they could get paid for it, but when people who want wire invariably buy that which they get at lowest price, and the cost is regulated by the proportion of adulterant costing three cents per pound, and of rubber costing over a dollar per pound, the temptation to use sufficient rubber for good results is not strong.

A NEW TYPE OF RUBBER WASHER.

A PERIOD of commercial and industrial inactivity has the effect often of causing improved methods to be sought for, as a means of setting in motion the machinery of business which has become stagnant. It is with a view to stimulating the activity of the India-rubber industry that an enterprising firm of machinery-manufacturers offer a new type of rubber-

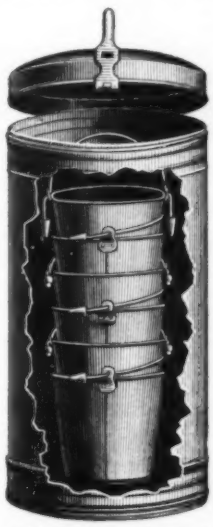


washer, of which a good idea will be given by the accompanying illustration. The operation of this machine is first to reduce the crude stock by running it through a roll-washer. It is in turn shredded and forked into the washer, where it is cut and beat up until all foreign matter is loosened. Bark floats to the top, where it is run or skimmed off; sand and heavy dirt settle; and the stock, being thus cleaned from dirt, is forked out, ready for drying. The washer is then ready to be cleaned out and refilled. The washer, when in operation, should have a stream of water running through it to carry off impurities. The operation of washing must be continued until water runs away clear and clean.

These machines are built in various sizes, but the one most commonly used, will shred from 1200 to 1500 pounds of rubber in ten hours. The machine has adjustment of roll and can be made to run open or closed, as desired. It is manufactured by the Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

SPECIALLY ADAPTED FOR RUBBER FACTORIES.

THE illustration shows an appliance that should at sight commend itself to rubber manufacturers for many reasons. It is known as the Safety Fire Bucket Tank, and it is in brief an air-tight tank holding six fire buckets, and a quantity of chemical solution more effective than many times the same amount of water. The tank is made of heavy galvanized iron, lined to prevent rust, japanned on the outside, and has a cover which closes on a rubber tube packing, making it air-tight. The



handles of the buckets are weighted so that when one is removed, the next rises automatically. Each bucket has three lugs inside, at the bottom, so that when they are placed one within the other, they rest on the lugs, and consequently cannot bind or stick. Every tank is furnished with a bag of dry compound, in powder form, with full directions for use. This powder, dissolved in water, forms the chemical solution with which the tank is filled. This solution, coming in contact with flames, forms a gas which has a fire-destroying capacity equal to many times the same quantity of water. If the tanks are to be exposed to cold weather, a compound that will not freeze in the lowest temperature is furnished. The solutions contain no acids, are harmless, and do not lose strength with age. When the six buckets have been removed, enough solution is left in the tank to re-fill four of the buckets. The advantages of this appliance over the unsightly fire pails, partly full of stagnant, ill-smelling water are too obvious to need more than brief mention. Manufactured by the Safety Fire Extinguisher Co., 51 E. 44th street, New York, N. Y.

JAPANESE RUBBER IMPORTS.

THE importation of India-rubber goods by Japan is reported to be increasing. The value of such goods imported in 1895 is thus given by the Belgian consul at Yokohama: From Great Britain, 103,828 yen; from Germany, 73,156 yen; from France, 20,850 yen; from the United States, 19,150 yen; from Italy, 3996 yen; from Belgium, 1182 yen; total, 222,795 yen, equivalent to $222,126.61 in American currency. Raw India-rubber was imported in the same year to the value of 23,111 yen, mainly from British India. Rubber in sheets was imported to the value of 40,098 yen from Great Britain and 17,649 yen from Germany, or a total of 57,747 yen (=$57,573.76).

A COLUMN OF QUESTIONS.

HARD RUBEBR POWDER.

WILL you kindly let us know the name of some party who manufactures hard rubber powder, as we are in the market for a quantity of this material?

As far as we know all the manufacturers of hard rubber not only use the powder that comes from their lathes but are in the market constantly for more of it. Further than this they have contracts with most of the small turners to take their waste We are therefore unable to help you in this matter.

A LECTURE ON INDIA-RUBBER.

From Central America comes a request for some information respecting an address on the "Rubber Industry in South America," by Prof. H. H. Rusby.

THIS address was delivered for the state pharmaceutical association of New York, at Saratoga, on June 26, 1894, and was published in full, with illustrations, in the *Druggists' Circular* (New York) for August, 1894. Dr. Rusby, who is professor of physiology, botany, and materia medica in the New York College of Pharmacy, has lately returned from the Orinoco valley, where he made some observations on India-rubber and Balata which have been promised for the pages of the INDIA RUBBER WORLD.

A MISTAKEN REPORT.

I have been informed that a company composed of New York men has been formed, with a capital of $1,000,000 to build a rubber-shoe factory in Virginia. If you have knowledge of any such movement you will confer a favor by informing me.

THERE has been no such movement. It is true that New York parties have had a company incorporated in Virginia, where charters are cheap, with a big capitalization, on paper, to transact business in crude rubber, but it is not certain they will do even this.

THE NAME IS UNFAMILIAR.

Can you tell us what "White Extract" is and where it can be purchased?

READERS who are able to answer this question will confer a favor by enlightening both the questioner and THE INDIA RUBBER WORLD.

RECLAIMING PNEUMATIC TIRES.

In a recent issue of your journal we note with interest an article on reclaiming of pneumatic tires. We collect probably larger quantities of these old tires than any other concern, having handled something like one hundred tons this year. Please give us the names of those that have been concerned in manipulating this material.

IF the inquirer will write the names of the advertisers in THE INDIA RUBBER WORLD who make reclaimed rubber he will find exactly the people for whom he is seeking.

THERE ARE NO REGULAR IMPORTERS OF IT.

Will you kindly tell us whether there are those in this country who could supply us with some of the milk of the rubber tree? I see it stated that the sap is sometimes shipped into this country in tightly stoppered boxes and I note also that the Wilson bill speaks of the milk of the rubber tree as coming in free of duty.

RUBBER HORSE SHOES WANTED.

Can you give us the address of the manufacturer of rubber horse shoes to take the place of the regular iron shoe?

THE Whitman & Barnes Co., Akron, Ohio, make the Gibbs cushioned shoe,—one of many. Almost every manufacturer of mechanical rubber goods in the country has made or is making some special rubber horse shoe. The inventors in this line are numberless.

AN INQUIRY FOR TOY BALLOONS.

Can you tell me who makes toy rubber balloons?

EUROPEAN VIEWS OF RECLAIMED RUBBER.

FROM "TRADE JOURNALS REVIEW" (MANCHESTER).

IT appears that the imports of scrap rubber into America continue increasing enormously, and THE INDIA RUBBER WORLD regards that as evidence of the superior ingenuity of American factory-managers, and as a proof that the payment of higher wages in that country is not inconsistent with economical production. Our contemporary thinks it natural that in Europe, where a larger percentage of cheap rubber is used in manufacturing than in the United States, the production of reclaimed rubber could be most largely developed. On the contrary, the transatlantic demand is chiefly supplied from the American side of the ocean. It is worthy of note that Germany, which boasts of her progress in technical education, with a view to lessening the cost of manufacturing, contributed last year one-half of the 1900 tons of old rubbers imported by the United States. We question whether the extensive employment of old rubber in America will be regarded generally as an indication of the superior ingenuity of the people, except in an uncomplimentary sense. The people who are credited with the production of wooden nutmegs and India-rubber mutton chops certainly deserve to be regarded as ingenious.

FROM "DIE GUMMI-ZEITUNG" (DRESDEN).

THE increasing import of old rubber into the United States is regarded by THE INDIA RUBBER WORLD as proof of the superior intelligence of the American manufacturer and of the fact that high wages are not necessarily opposed to economical manufacture. "It would seem natural [says THE WORLD] that in Europe, where a larger percentage of cheap rubber is used in manufacturing than in America, the production of reclaimed rubber would be most largely developed. But on the contrary, the transatlantic demand is chiefly supplied from this side of the ocean. It is worthy of note that Germany, which boasts of her progress in technical education, with a view to lessening the cost of manufacturing, contributed last year one-half of the 1900 tons of old rubbers imported by the United States."

Two years ago we commented on the fact that in Germany no rubber-reclaiming establishment existed, and we heard later on of several attempts to establish one, but all failed for want of a practical and useful method of reclaiming. To render old rubber again fit for profitable use is a difficult problem, which can be solved only by an experienced and scientific specialist. The American methods of which, as far as we know, only two exist, are protected by letters patent, and, until a new discovery in this direction is made, the German rubber industry will have to look to America for serviceable and cheap "reclaimed" rubber. Many large German factories, however, work up their own scrap and goods which have become old in their warehouses.

RUBBER mats are now made for use at the bottom of porcelain bath tubs, the glassy finish of which is liable to cause painful accidents from slipping. Many a case of broken rib or serious bruise has been caused by a bather falling against the iron rim or sides of the highly-finished tubs. Cork mats have also been used, but are less desirable than rubber, as they chip off from frequent soaking, and pieces are apt to clog the pipes.

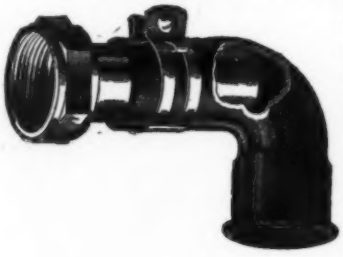
* * *

IN connection with a mention of the Hodgman single-tube tires, which are sold in white, red, blue, and yellow, the London *Wheelman* says: "In England racers with fancy tastes often ask for tires of varied hues, but cannot be supplied."

NEW GOODS AND SPECIALTIES.

THE "CLIMAX" RUBBER ELBOW.

THE construction and application of the Climax Extension Elbow will be clearly understood from the accompanying engraving. When the rubbers become worn out they can be readily replaced by new ones. To lengthen or shorten the connection it is only necessary to loosen the clamp with a screw-driver, make the adjustment, and tighten the screw. Made by the Davis & Stevens Mfg. Co., Seneca Falls, N. Y.



SOFT RUBBER TIP SYRINGE.

THE novelty of this syringe is in its consisting of glass, with a soft rubber tip, which will not cause any irritation or inflammation of the parts to which it is applied. Another feature of note

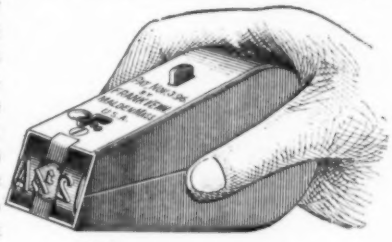
is that the packing, patented by the makers, John M. Maris & Co., Philadelphia, Pa., is also made of rubber, works just as tight as leather packing, and is long lived. It is altogether a very neat and serviceable-looking article.

"VIM SPECIAL" TIRE.

WE present herewith an illustration of the new Vim Special tire of the Boston Woven Hose and Rubber Co., which came to hand too late for insertion in our April number. This tire is especially designed for fast riders,—that class who enjoy a good brisk spin and like to ride 12 to 18 miles an hour, or go out with the boys for a century run. They want a tire as resilient as it is possible to get it, yet one that won't give too much trouble with punctures. While the Vim Special is technically a "single tube" tire, it has two tubes, being really two complete tires made into one, but weighing no more than the regular "Vim B" road tire. In the illustration A and C represent seamless rubber tubes, while B and D are seamless loose-woven fabric. This is a combination which offers a great number of strong points, principal among them being: With two separate tubes, if one should become porous the other will hold air, so it might be said that a porous Vim Special is an impossibility; the plies of the fabric being seamless, they are stronger than when made the old way; the tires are more resilient, because the fabric can be reduced in weight with safety, and more rubber be used. This tire, of course, has the "Pebble Tread" which characterizes the tire products of the Boston Woven Hose and Rubber Co., has great constricting features, has "Vimoid" forits repair kit and is exceedingly easy to repair.

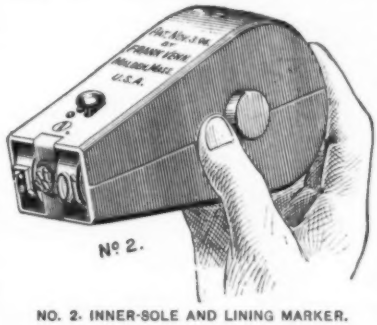
VENN'S CARTON-MARKER.

THERE is in use at the factories of the Boston Rubber Shoe Co., at Malden, Mass,, an ingenious invention by Frank Venn, of that town, for marking rubber shoes with the size, figures, and letters, for marking cartons for rubbers and for other similar purposes. It is claimed that an operator with a little practice can with this machine mark thirty pairs of shoes per minute, and 800 pairs per hour can be marked on an average. The figures and letters used in the machine can be changed readily when the operator desires to change from one size to another. It is not necessary to ink the machine oftener than once per day. The machine is only twice the size of the cuts shown on this page and weighs four ounces. No. 1 is adapted especially for marking cartons as they lie on shelves or counters. No. 2 is fitted for all perpendicular working. At the factories above named the use of rubber stamps for marking rubbers and cartons has been dispensed with. They use the No. 2 machine for marking inner-soles in the cutting-rooms, thereby avoiding the possibility of mistakes between the cutting and making-up departments. The durability of the machine is practically without limit, except as to the rubber band, which can be replaced at slight cost. Mr. Venn's address is, Lock-box No. 1627, Malden, Mass.



Nº 1.

NO 1. CARTON-MARKER.



Nº 2.

NO. 2. INNER-SOLE AND LINING MARKER.

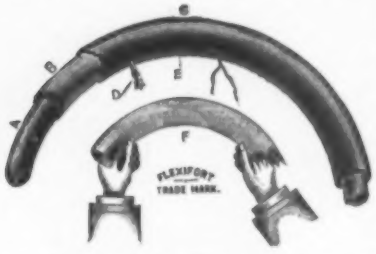
THE DIAMOND TREAD TIRE.

THIS tire, manufactured by the Indiana Rubber and Insulated Wire Co., Jonesboro, Ind., is constructed the same as their "Paranite" single tube tire except that it is cured in open heat instead of molds. The advantages claimed for this are that

the tires are much tougher, wear better, are less liable to crack, and are not so easily injured by age. Durability, resiliency, strength and speed are the essential points claimed for this tire. The Diamond corrugated tread prevents slipping.

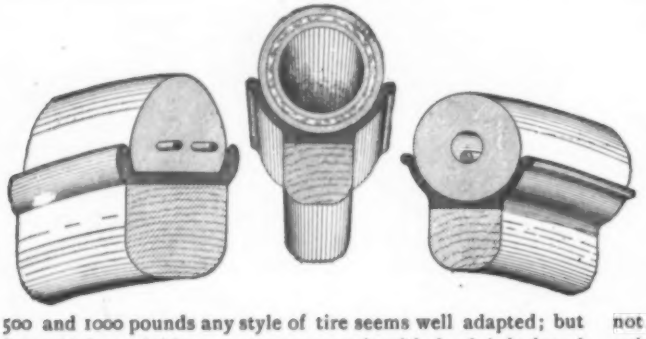
THE FLEXIFORT TIRE.

A VERY excellent idea of the construction of the Flexifort inner-tube tire is given by the engraving herewith, in which A represents the air-tube, B a circular woven fabric, C an outer rubber covering, D the valve stem, and E the laced opening. The lower cut, F, shows the circular feature of the tubular seamless fabric. This tire is manufactured by the Mechanical Fabric Co., Providence, R. I., who also make a single-tube tire known as the Conqueror.



RUBBER TIRES FOR VEHICLES.

THE illustration herewith shows end views of three forms of rubber tires manufactured by the American Rubber Tire Co., New York. Contrary to the common supposition, one kind or style of rubber tire is not equally appropriate for all uses or for all kinds of vehicles; for instance, it is not best to use solid rubber tires on light pleasure wagons, or the more yielding cushion or pneumatic tires on heavy vehicles. The American Rubber Tire Co. find that for vehicles weighing with load less than 500 pounds their cushion or pneumatic tires are decidedly preferable. Solid rubber on light vehicles gives a vibration—a trembling of the wheel which is unpleasant and causes rapid wearing of the tires. For vehicles weighing with load between



500 and 1000 pounds any style of tire seems well adapted; but for vehicles weighing over 1000 pounds with load it is found best to use solid tires. The cushion tire shown to the right is constructed of a softer, yet tough, compound than the solid tire. There being no air chamber there can be no puncture of this tire, as may happen with the pneumatic, the hole in the center being merely space to give resiliency. This tire is held in place by an endless wire located within the rim, completely encircling the wheel. It is made in two sizes, 1 inch and 1¼ inches in diameter, and can be applied to wheels of any height, and to treads varying from ¾ inch to 1¼ inches.

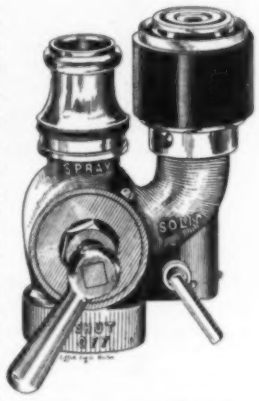
PARKER'S BATHING SHOES.

To keep the sand out, prevent pebbles from hurting the feet, to protect them from being cut by sharp particles of glass, shells, etc., thus adding a feeling of security and comfort to the bather, is the object of the Parker Bathing Shoe. These shoes are made in white or black duck, as well as in fast black sateen, with rubber soles. The prices range from

$1.95 to $3.25 per pair, including grades for children, misses, ladies, and men. Manufactured by John H. Parker, 103 Bedford street, Boston, Mass.

HART'S COMBINATION NOZZLE.

THE cut shown with this will give a good idea of the construction of Hart's Combination Nozzle for fire fighting. The manufacturer claims as special points which this nozzle possesses over all others: It throws a perfect solid stream by having a series of wings inserted between the valve and tip. It has a movable sleeve that is worked on a threaded body, whereby it can be moved to any desired point, forward or backward, without diminishing the volume of water, but increasing or lessening the diameter of the spray as desired by the pipeman. It also has a chemical sized outlet that delivers a 5-16 inch stream from the center of the spray top, and which works independently of the other two streams, having a separate valve. The three outlets can be operated simultaneously, or either two together, thereby getting the fullest delivery of water and reducing back pressure to that of nominal friction, just as well as delivering from either one. There is a rubber cushion on the under side of the nozzle, and one around the sleeve to protect it from injury in falling. This nozzle is manufactured by M. H. Hart, 26 Union street, Boston, Mass.



THE "GOOD" STOPPER.

A STOPPER for the bath tub or wash basin that is really a stopper, and not a plug, is shown in the accompanying cuts. It is provided with a rubber disc which works on the valve principle, and holds every drop of water, even if the outlet is not perfectly round, or is chipped off. It drops readily into position and stays there until intentionally removed. Only two sizes are required to fit every basin and tub. The "Good" stopper is being supplied by many of the foremost manufacturers and supply houses in the country on all their lavatories, bath tubs, and other fixtures where stoppers are required. Manufactured by the Good Manufacturing Co., 28 Monument street, Indianapolis, Ind.

THE CARMICHAEL RUBBER DAM HOLDER.

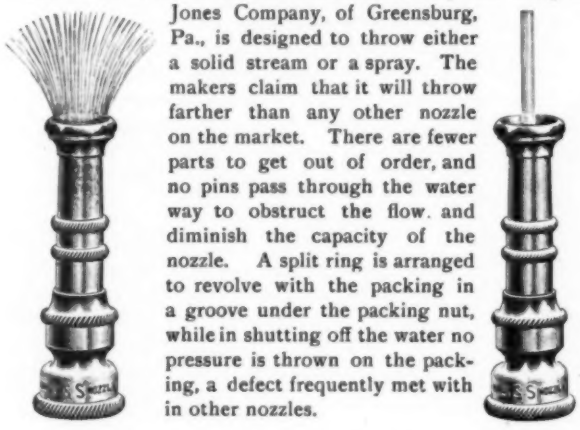
TO hold rubber-dam smoothly over the face of the patient and out of the way of the dentist while operating upon the teeth is the office of this appliance. It has four points of attachment to the dam, and avoids the necessity for holding weights to keep the lower part of the sheet in place. One of the fastenings is shown at A. To attach the dam, place it upon part B, bring the end A over and press it firmly down and it will hold the dam securely. Having made the attachment, draw the braid through the slots in the hard-rubber guards until the

dam lies closely and smoothly on the face. The braid may then be released, when it will be held by the tongues in the

guards. Manufactured by the S. S. White Dental Mfg. Co., Philadelphia, Pa.

A NEW HOSE-NOZZLE.

THE S. S. S. Hoze Nozzle, manufactured by the Kelly & Jones Company, of Greensburg, Pa., is designed to throw either a solid stream or a spray. The makers claim that it will throw farther than any other nozzle on the market. There are fewer parts to get out of order, and no pins pass through the water way to obstruct the flow and diminish the capacity of the nozzle. A split ring is arranged to revolve with the packing in a groove under the packing nut, while in shutting off the water no pressure is thrown on the packing, a defect frequently met with in other nozzles.



THE PUNCTURELESS TREAD TIRE.

A REFERENCE to the cut herewith will show that in this tire the inner tube is separated from the tread portion, and is covered with layers of fabrics chemically treated, and so made that while not affecting the resiliency, the liability of puncture is almost nothing. Upon any sharp substance entering the outer portion of the tire this inner tube is simply depressed, and upon the withdrawal of the substance it resumes its normal position. Only the best Pará rubber and sea-island cotton are used in the construction of this tire, and the quality and workmanship are fully guaranteed. Manufactured by the Pará Rubber Tire and Mfg. Co., Williamsport, Pa.

THE SAMSON SPECIAL TIRE.

THE Samson Special tire is shown in the cut herewith. It is made of the well-known Samson seamless thread fabric, with a milled and specially reinforced tread, and is one of those kind of tires which can be ridden far away from repair shops with a feeling of perfect security—and that too without carrying along a bag full of plugs, tape, repair tools, etc. For indoor riding too this milled tread is absolutely non-slipping, as some of our speediest indoor riders can attest. Manufactured by the New Tire Co., New York.

THE ZETA ATOMIZER.

THE "Zeta" is the latest oil atomizer brought out by the Alpha Rubber Co., Ltd., Montreal, Can. It has an entirely novel attachment, consisting of a hard-rubber cup, exactly fitting around the hard-rubber spray, as shown in the illustration. The office of this cup will be appreciated by its users—it is to prevent the vaseline, liquid albolene, or other oily substance from coming in contact with the soft rubber of the atomizer or the hand of the user.

THE NAUGATUCK RECLAIMING PLANT.

AS everybody in "the trade" knows, the extensive and very complete rubber-reclaiming plant of the Wales-Goodyear company at Naugatuck, Conn., has been still further improved since it passed into the hands of the United States Rubber Co., and it is operated now with a view to supplying the demands of all the factories of the United States company for reclaimed rubber. Not only this, but an active bid is being made now for orders from the outside, the plant being so large since the incorporation with it of the outfit formerly used by the Woonsocket company that it can more than supply the wants of the interest controlling it. The sales of the product of the Naugatuck plant are under the management of James M. Stotesbury, who has been identified with the rubber-reclaiming industry since 1879. In that year, the possibilities of the business having been presented to him in a purely accidental manner, the firm of J. M. Stotesbury & Co. was formed in Philadelphia, the unnamed partner being N. Chapman Mitchell. The business was a success from the start, and in 1883 it was incorporated under the style of the Philadelphia Rubber Works, with Mr. Stotesbury as secretary. He resigned from that position on March 23, 1897, to accept that of selling-agent for the reclaiming plant of the United States Rubber Co. For eighteen years he has been connected in an important way with the trade, which he understands thoroughly and in which he is an important factor.

BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully. The list of patents this month covers an unusually wide range of applications of rubber, although tires continue to absorb a greater amount of interest among inventors than any other one branch of the industry. It is worth noting that new double-tube or inner-tube tires are still being brought out by inventors. Few familiar names appear in the list below, but exception must be made of Charles E. Duryea, the inventor of several tires already patented; of Henry J. Doughty, who continues active in the line of rubber footwear; and of Louis K. Scotsford, the rubber-stamp man.

TIRES.

No. 578,035.—Vehicle-Wheel. Charles E. Buckley, Summit, N. J.

In a vehicle-wheel, a tubular rim of resilient material having a peripheral slot on the line of the tread, the free edges and side-walls of the tube serving as springs to support the load, in combination with an annular shoe matching the slot and held therein to serve as a bearing-surface for the wheel, and having a supporting-flange extending across the rim and bearing against the inner surface thereof diametrically opposite the slot.

No. 578,134.—Bicycle-Tire. John A. Burton, Skaneateles, N. Y.

A removable bicycle-tire, consisting of three separable segmental sections forming, when placed together, the complete tire, each of the sections being formed of cylindrical pieces of cork, each having a central opening and being cemented together with such openings in alignment, whereby a central passage is formed through the sections, and an endless coil spring inserted in the continuous passage formed by the three sections placed together, whereby the said sections are removably held on the rim of the wheel.

No. 578,191.—Pneumatic Tire. Edward C. Bartlett and William A. Murbach, Lorain, Ohio.

A pneumatic tire comprising a series of independently-inflated sections in the form of oblong hollow bulbs or sacks, the section being made longitudinally elastic and transversely inelastic and inclosed within a continuous outer tube.

No. 578,227.—Bicycle-Tire. William P. Fogarty and August C. Krueger, Chicago, Ill.

In a tire, the combination of an interior air-tube and an exterior covering for tube formed of hide, said hide being tanned upon the surface, forming the tread of the tire and upon the surface resting against the air-tube, and provided with a central portion underlying and intervening between said surface, which is untanned.

No. 578,433.—Pneumatic-Tire Repairer. Richard Wehl, Defiance, Ohio.

The combination with a single tube pneumatic tire, of a valved opening thereinto, a string extending through the tire and secured to the valve on the inside of the tire, and a hook adapted to pass through a puncture in the walls of the tire and to engage the string to draw it outward through the opening through which said hook was introduced, and a plug of repair material adapted to be fastened to the string and introduced into the tire through the valved opening and thence drawn into position to close the puncture.

No. 578,551.—Vehicle-Tire. Charles E. Duryea, Peoria, Ill., assignor to the Indiana Rubber and Insulated Wire Co., Marion, Ind.

A pneumatic tire having within its air-chamber a cement or sealing agent, which remains normally in liquid state, but which hardens or coagulates when exposed to the outer air, to effect the sealing of a vent or fissure in the tire.

No. 579,122.—Pneumatic Tire. Edgar W. Balding, Newark, N. J.

The combination with a rim, and a pneumatic tire, the said corrugations being spaced apart transversely and arranged at or near the edges of the rim and extending entirely around the rim and tire, and cross-corrugations extending transversely of the rim and tire and filling the space between the spaced longitudinal corrugations.

No. 579,216. Tire for Vehicle Wheels. Samuel E. Barnes, Willimansett, Mass.

An air-tube for a pneumatic tire consisting of a tube proper, having its base portion at one end omitted, a diaphragm-strip edgewise attached to opposite inner sides of the tube proper, having attachments with the end portion of the tube, serving to close the base of the tube at the place where the tube-base is omitted and having an attachment to the inner portion of the tube-base near the margin of a recess, the diaphragm having its other end enclosed and secured between the upper and lower thicknesses of the tube at the other end of the latter, and being otherwise unsecured, the valved passage entering through the closing part constituted by said base portion of diaphragm and a valved passage entering through the base of tube proper to the chamber below the diaphragm.

No. 579,300.—Vehicle-Wheel. Charles E. Tomlinson, Syracuse, N. Y., assignor to Irving H. Weston, same place.

The combination of a wheel-rim having its outer face provided with separated grooves formed with engaging shoulders, and peripheral bearing-surfaces disposed at opposite sides of the grooves and increasing in diameter from their outer side edges, a tire provided with shoulders arranged in the grooves, peripheral bearing surfaces disposed at opposite sides of the shoulders and increasing in diameter from their outer side edges for engaging the former bearing surfaces, and annular eyes disposed at the outer sides of the shoulders, and annular bands arranged in the eyes whereby the tire edges swing on said bands.

No. 578,846.—Pneumatic Tire. William L. Stewart, Wilmerding, Pa.

The combination with a wheel-rim, a tire in the form of a flat band, a binding-wire for the tire and an inner inflatable tube, of a valve provided with an inner and outer tube, each having one end screw-threaded and provided with a head at the other end, bent links pivoted to opposite sides of the head of the outer tube and connected with the binding wire, a nut on the outer tube, and a valve-casing screwing on the said tubes.

No. 579,979.—Bicycle-Tire. Restore B. Lamb, Camden, N. J.

A bicycle-tire consisting of outer and inner tubes, a piece of fabric with its sides secured to the tubes, and strips of tough material secured to said strip on opposite sides thereof, the joints of the strips being broken on opposite faces the edges of adjacent strips abutting forming a continuity of the strips on both faces and a uniform thickness of the guard throughout the length of the same.

MECHANICAL GOODS.

No. 578,517.—Hose-Nozzle. Frank E. Johnson, Greensburg, Pa., assignor to John T. Kelley, Brooklyn, N. Y., and George M. Jones, Pittsburgh, Pa.

In a nozzle, the combination with a rotary body portion having threads therein, of a hollow spindle with openings therein

and a threaded portion engaging with the threads in said body portion, said spindle below said threaded portion having a straight square shank, and a hose connection having a square seat therein adapted to receive said shank.

No. 578,716.—Telegraph Fire-Hose. Joseph Buchtel, Portland, Ore.

The combination with the ordinary hose, of the pipe-section having a cut-off valve, cocks on each side of the valve, the telegraph-hose composed of sections carrying conductor-wires, the nozzle, the circuit-closer, and a chemical fire-engine connected with said cocks.

No. 579,173.—Nozzle and Sprayer. William C. Oberwalder, New York City.

A nozzle and sprayer, consisting of a conical attachment or nozzle, one end of which is enlarged and provided with interior screw-threads for attachment to the source of supply, the outer end of said attachment being funnel-shaped said attachment having a tubular opening extending therethrough, and a conical sprayer secured in said funnel-shaped orifice, an adjustable yoke having backwardly-directed arms, having longitudinal slots, adapted to engage shoulders or projections upon the exterior of the funnel-shaped portion, and attachments for securing said arms upon said projections.

No. 579,493.—Garden-Hose Holder. Carl Nelson, Marinette, Wis.

In a garden-hose holder, the combination of the disk, the clips struck therefrom, the spindle and said disk pivoted to said spindle.

No. 579,873.—Lawn-Sprinkler. Charles F. Hitchcock and Frank H. Edwards, Los Angeles, Cal., assignors, by mesne assignments, to the Hitchcock Metal Co., San Francisco, Cal.

In a lawn-sprinkler the combination of a square supply-chamber, a circular discharge-chamber, a discharge opening, openings in the corners of the supply-chamber extending to the top of the sprinkler and orifices connecting said openings with the discharge-chamber, whereby the water is discharged against the sides of the circular chamber and is given a continuous circular movement.

BOOTS AND SHOES.

No. 577,843.—Flexible Support for Shoes or Boots. Henry J. Doughty, Providence, R. I.

The combination is a support for shoes, etc., of a flexible shell, stiffening means extending along the edges of the sole portion of the shell, and also projecting upward at the sides and heel.

No. 578,794.—Boot or Shoe. John F. Warner, Boston, Mass.

Claim.—In a boot or shoe, a filling, to be placed between the outer and inner soles, consisting of a tubulated elastic fabric each tube of which is elastic and compressible and interiorly connected to air-passages whereby the boot or shoe is thoroughly ventilated.

No. 579,397.—Rubber Footwear. Joseph M. King, Brooklyn, N. Y.

In a rubber overshoe or boot, the combination with the outsole, the insole, the upper and the upper-lining, of a reinforcing-strip which runs continuously along the sides of the shoe or boot and around the toe thereof from one side of the counter to the other between the outsole and the insole and between the upper and its lining, the said strip having a sinuous or irregular upper edge and being united from edge to edge by cementing and vulcanizing with the said parts between which it is interposed.

DRUGGISTS' SUNDRIES.

No. 578,210.—Pessary. Newton E. Charlton, Trinidad, Colo.

A cup-shaped soft-rubber pessary, comprising a thin bottom, an inner wall which gradually thickens from its junction with the bottom to its top, an outer wall forming with the inner wall an annular chamber, a recess formed in the thickened wall, a valve-casing in said recess, and a spring-pressed plug-valve in the casing for controlling a part leading from the chamber to the cup.

No. 578,436.—Atomizer. Thomas Woodruff, Withington, England.

An appliance for spraying medicated and other solutions constructed with two concentric tubes both drawn to a fine-nozzle at one end, the nozzle of the inner one projecting into that of the outer one in combination with a cover which seals the end of the outer tube, the screw for adjusting the position of the inner tube and the check-nut for locking the two tubes in position when adjusted.

NOTIONS.

No. 579,825.—Dress-Shield. Dora Harrison, Lansing, Mich.

A dress shield composed of inflated side portions or cushions arranged side by side and an intermediate inflated saddle portion in communication with the inflated side portions and provided at the ends of the saddle portion with means whereby it may be secured to a garment.

MISCELLANEOUS.

No. 577,867.—Fumigator. Carl F. Lauber, Philadelphia, Pa.

In a device of the character described a cylinder, a cover on one end, said cover having a convex surface with perforations therethrough, a bead formed on said cylinder to limit the position of the cover, a plug secured in the other end by a flange, a wire gauze resting on said flange leaving an air-space between the gauze and the plug, a nipple formed with said plug ending in a head, said plug having a passage therethrough and an elastic bulb attached to the nipple.

No. 578,009.—Billiard-Cushion. Stephen De Gaetano, Brooklyn, N. Y.

In a billiard- or pool-table, the combination, with its elastic cushion, of a strip of hair-cloth curved in cross section and embedded in and beneath the upper surface of said cushion, between the upper outer and inner edges thereof.

No. 578,222.—Artificial Limb. Martin B. Donaldson and William Kespohl, Duluth, Minn.

An artificial limb provided with a separate yielding pneumatic socketed portion compressing an inner sleeve of leather, two separated rubber sleeves about the same, and an outer projecting-sleeve about the outer sleeves; the two rubber sleeves being joined at their upper and lower edges so as to form a air tight air receptacle, and provide a stout durable upper edge above the wooden portion of the limb; and a nipple inserted into the upper edge of the socketed portion, for the introduction of the air.

No. 578,527.—Blank for Making Sponge-Rubber Type-Bases. Louis K. Scotford, Chicago, Ill., assignor to the Superior Rubber Type Co., same place.

Claim.—A molded blank for sponge-rubber type-bases, comprising an integral strip of sponge-rubber, provided with equidistant, parallel severing grooves, which are molded in the blank and afford smooth or finished surfaces on all edges of the type-bases cut from the said blanks.

No. 578,575.—Saddle-Pad for Harness. William Mathis, New York city.

A pad for harness made of a rubber tube laid backward and forward with the different portions closely adjacent to each other, and bands or straps for holding the portions of the rubber tube in their proper relative positions, and a band passed around the tube at the bend to contract the same and insure an opening for the inflating air between one portion of the tube and the next.

No. 578,734.—Handle for Bicycles. Fred B. Fanning, Newburyport, Mass.

A pneumatic pad, covering or cushion for the handles of bicycles and similar vehicles, which consists of a central tubular part and of an outer casing which is connected with said tubular part at each end, whereby a space between said outer casing and said tubular part is formed, which is adapted to be filled with air, said central tubular part and said outer casing being composed of flexible material, said pad, cushion or covering being provided in one side thereof with an oblong opening and said outer casing being provided with an air-valve through which said space may be filled with air.

No. 578,983.—Device for Connecting Flexible Tubing.

In a hose-coupling, a tube having an external screw-threaded portion, and a series of annular tapering ribs at one end, and the ribbed end being of less diameter than the screw-threaded portion, in combination with a nut having an internal screw-threaded conical aperture the threads of the smaller portion of the nut engaging the threads on the sleeve, whereby the hose is clamped between the ribs on the sleeve and the threads in the nut.

No. 579,313.—Horse Shoe Pad. Luther H. Bellamy, New York city.

A pad or cushion for horses' feet, composed of rubber and canvas or similar material, said pad being thicker at the heel than at the toe, and being conformed to the shape of the foot, and being also provided centrally of the heel with a downwardly-directed spring-bearing, and at each side with downwardly directed bearings, in combination with a shoe which is secured thereto, the shoe being also provided with the usual toe, and with downwardly-directed bearings at the sides thereof, which are located outside of those formed on the sides of the pad or cushion.

No. 579,774.—Bicycle-Handle. George W. Rugg, Newark, Ohio.

A handle or grip comprising an inner tubular former, a cushion or packing surrounding the same, an outer covering of flexible material surrounding and inclosing said cushion and having its ends tucked in the open ends of the former, and end plug removably inserted in the ends of the former.

No. 579,787.—Artificial Limb. Ross Bowman, Stoyestown, Pa., assignor of one-half to J. H. Gardner, same place.

In an artificial limb the combination of a foot-section consisting of a rigid shell, having the configuration of the upper part of the foot, a toe-section secured thereto and having its lower portion turned inwardly and backwardly, an inside leather sac fitting up into the foot-section and secured to the same at points above the instep and heel, and an inclosed pneumatic sac, the toe of the sac and inclosing casing extending into and being seated in the toe-section of the limb.

RUBBER MACHINERY.

No. 579,938.—Rubber-Tubing Machine. Henry A. Cushman, Chicago, Ill., assignor to the Mechanical Rubber Co., Passaic, N. J.

In a machine of the class described, a head portion carrying a die, in which there are combined a spider secured in the head portion, a central pin on such spider, an adjustable ring eccentrically mounted in the head portion, and a die proper eccentrically mounted in the adjustable ring surrounging the central pin and provided with an inner substantial knife-edge.

TRADE-MARKS.

No. 29,618.—Rubber or Elastic Heels for Boots and Shoes. Dominick A. McDonald, Boston, Mass. Filed January 7, 1897.

Essential feature, the word "McDonald" arranged within or upon a horseshoe-shaped or heel-shaped shield. Used since January 1, 1893.

No. 29,620.—Packing, Gaskets and Rubber Compound. The Peerless Rubber Manufacturing Co., New York City. Filed January 9, 1897.

Essential feature, the compound word "Rain-Besto." Used since May 1, 1896.

No. 29,780.—Mackintoshes and other Rubber Clothing. McCord Rubber Co., St. Joseph, Mo., and Chicago, Ill. Filed February 25, 1897.

Essential feature, the words "Golden Rule." Used since January 1, 1893.

DESIGN PATENTS.

No. 26,757.—Dress Shield. Isaac B. Kleinhart, New York City, assignor to the J. B. Kleinhart Rubber Co., same place. Filed April 18, 1896, serial No. 588,188. Term of patent, fourteen years.

THE BEGINNING OF THE RUBBER-SHOE SEASON.

IT seems to be the verdict of the rubber-shoe manufacturers that the extreme has been reached in the direction of sharp-pointed toes in leather footwear, and that the tendency is now in the opposite direction, leaving the rubber-men no choice but to revise their stock of lasts. A year ago the same tendency was remarked in some centers of the trade, but orders for "needle" toes continued to come in long after the time predicted for the end of that extreme of fashion. This season, however, no room for doubt remains, and in announcing their styles for next winter several companies have omitted the needle toe in goods for men's wear, while all have added new lasts in the attempt to provide something to meet the popular taste for a compromise between sharp-pointed toes and the "regular."

Rubber-manufacturers do not bring out new styles in toes with the idea of stimulating buying by the allurement of novelty; they can only try to keep pace with the ever-changing styles in the leather footwear for which rubbers form an outer covering, and the cost of lasts alone is enough to make them prefer a conservative course. Nor do jobbers and retailers relish changes in styles which render less saleable the goods they already have on hand. Hence the language of a recent circular letter of a leading rubber-shoe company, which is almost apologetic. It begins: "We regret being obliged to come before you again with a list of styles on new toes, but the conditions on leather styles seemed to demand it of us." Each of the companies has one or more new styles in toes which it is putting forward as likely to prove the most popular, though most of them will continue making on the toes which have been in the market for the past year. An exception to be noted is that nearly all the old manufacturers have omitted needle toes for men's shoes this year, and the American Rubber Co. have left them off for women's wear as well. There are no needle toes catalogued by the Banigans or the Hood Rubber Co. The Boston Rubber Shoe Co., however, retains them for both men's and women's shoes.

The Boston Rubber Shoe Co. announce to the trade: "For the season of 1897–98 we shall make a new toe on men's goods called 'derby' toe, and, on women's goods, called 'mystic' toe, in various styles. These, we trust, you will find an excellent fit for the leather shoes called by a variety of names, such as 'coin' toe, 'nickel,' 'half-dollar,' etc. They are a compromise between piccadilly and needle toe on men's, and between opera and needle on women's." It is no light matter to make a decision as to the proper width of a rubber, before the leather goods which it is to accompany have been manufactured. The plan pursued by the Boston company this year was to collect standard styles in leather shoes from twenty-two makers in women's goods and from fourteen in men's goods, the average measurements determining those of the mystic and derby toes, respectively.

The other companies are manufacturing "London" and "coin" toes, the latter being practically the same as the derby described above. It differs from the "bulldog" toe of last season principally in that it lacks the swell on the outer edge of the foot which was characteristic of that style.

An item of importance in regard to these new styles is that the lasts correspond in length more nearly than heretofore to the standard of leather shoes. In most instances it will be found that a No. 4 women's coin toe will fit a woman's No. 4 leather

THE "EMPEROR."

Derby. Mystic

NEW TOES IN BOSTONS.

THE "EMPRESS."

shoe, and a No. 7 coin will fit a men's No. 7 leather shoe. Consequently, in ordering these goods it will presumably not be necessary to call for as many large scales of sizes as has been necessary on the opera and piccadilly shoe lasts.

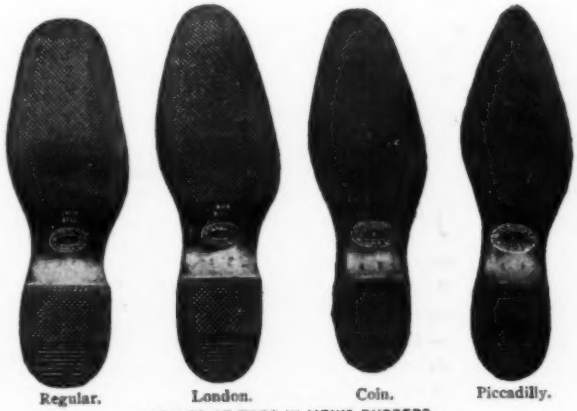
A comparison of the catalogues of 1896 and 1897 of The L. Candee & Co. shows that of the leading styles illustrated in men's goods, there will be the following difference in the number of styles made on the different toes, and it is probable that a similar proportion will hold good in respect to some other companies:

	1896–97.	1897–98.
London toes	none.	10
Coin	none.	13
Piccadilly	14	3
Needle.	16	9

Apart from the tendency noted in regard to toes, there is little change to note in styles as compared with last season. Some of the companies have changed scarcely a line in their catalogues, presenting the same illustrations, the same description, and, with slight exceptions, the same gross prices as last season, so that a mere study of printed announcements would suggest no idea of changes of taste among buyers. Dealers, however, are agreed that the class of goods known as the "storm slipper" are steadily becoming more popular than the lower-cut rubbers, which had all the call not so many years ago. Evidently wearers are desirous of having as much protection as possible from storms, and when the sidewalks are wet or covered with snow.

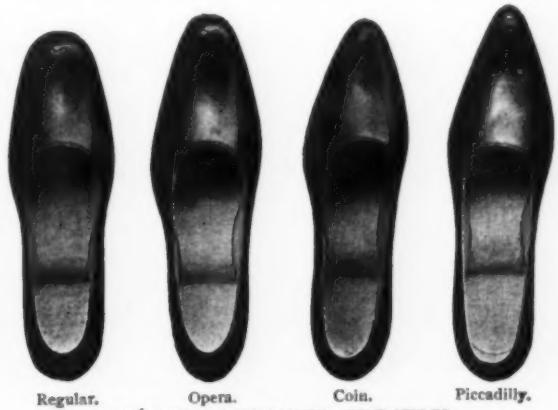
Another style of shoe which has been gaining steadily in popularity for several seasons is that known as the "Emperor" arctic, and included by that name in the output of most of the companies, and under some other names in that of the other factories. They are called the "Beacon" gaiters in the Boston Rubber Shoe Co.'s lists. The Emperor style is a light, high, three-buckle gaiter, jersey cloth top, and black fleece lined. It is made in medium, London, coin, and needle toes, in three widths, and listed at $2.17 per pair. For women, misses, and children, this style is termed the "Empress," and is made in the same way, except that it is supplied with one buckle and two straps. The styles of toes are medium, opera, coin, and needles, and the list prices are: Women's, $2.02; misses', $1.72; children's, $1.57. Goods of this class are packed in cartons. They are best suited for city wear, and are in greater demand in New England than in New York on account of the longer continuance of winter and the greater snowfall, although Emperors are meeting with a growing sale in New York. They offer a degree of protection in winter which no other article of rubber footwear of equally neat appearance would give, while the price is reasonable. Gentlemen obliged to walk much in the streets will find the Emperor not necessarily noticeable for its high cut, since it may be as nearly hidden by the trousers as the ordinary shoe. Many persons, by the way, endeavor to protect the trousers from contact with slushy streets by putting the bottoms inside the gaiters. These shoes have proved welcome to persons going out in evening dress in winter, less warmly shod than at other times, perhaps, when the Emperor affords an easily-adjusted and easily-removed protection from cold, without injury to the patent-leather or other fine shoes.

In January last THE INDIA RUBBER WORLD printed an in-



Regular. London. Coin. Piccadilly.

STYLES OF TOES IN MEN'S RUBBERS.



Regular. Opera. Coin. Piccadilly.

THE 'CLIFTON," FOR WOMEN.—FOUR STYLES.

terview with an important member of the rubber-shoe trade, respecting the prospect for competition between the United States Rubber Co. and the new companies then about to commence operations. One feature of the interview is worth repeating here:

The established dealers can be made interested in a new line, of course, by the offer of very liberal inducements, and this probably is what the Banigan company have in view. But the first move of the dealers to whom these inducements are offered will be to report to the old companies, who will have a chance to do as well or better, if they like, and here is where Mr. Banigan will have a chance to measure his strength with the United States Rubber Co. . . . It might happen, in case Mr. Banigan showed a disposition to fight, that the United States Rubber Co. would meet his cut in prices with still lower figures for the product of one of their factories—say the Woonsocket mill, which Mr. Banigan built up—and thus leave him helpless.

What was foreshadowed here has taken place—so far as it relates to the character of the competition. The contracts with jobbers under which the products of the United States Rubber Co. are sold do not apply to the Woonsocket goods, and the opportunity afforded to cut prices on this line has been taken advantage of to the utmost. Thus men's short boots, listed gross at $3, were intended to be sold to retailers at $2.14 per pair. The Banigan price was a trifle lower, which resulted in Woonsockets being offered at once as low as $2, and, although the new prices have been out for less than two months, the cutting has proceeded until sales have been made by jobbers at least as low as $1.75 per pair, less 5 per cent. for cash. This brings the figure below the cost to jobbers of the goods, and doubtless such transactions have been made with a view to inducing liberal buying of leather goods from the same parties. This, by the way, has always been a feature of the rubber-footwear trade difficult to deal with, since a jobber might insist upon his right to give away a few cases of rubbers, if he liked, in order to make a heavy sale of leather shoes. A large jobber of Woonsocket goods with whom an INDIA RUBBER WORLD man talked said that he had dropped this line on account of the confusion in prices and was now handling a different line.

Orders from the trade are coming forward less rapidly than was generally expected, in view of the recent marked decline in prices, with an additional inducement in the shape of an extra discount of 5 per cent. until October 1. The jobbers, immediately after the announcement of the new prices for this season, sent out their salesmen in pursuit of orders, with the expectation that buying would begin with a rush, and a good season's business would be done. It probably will be found, however, that the placing of orders up to date has not been more extensive than usual at this time of the year. Not even the heavy cutting on Woonsocket goods has had the effect of bringing the season's buying so far to a heavy total. From many sources the suggestion comes that dealers hesitate to order now, feeling that by waiting they may profit from a still further cut in prices. This recalls the expression of an out-of-town jobber in the last INDIA RUBBER WORLD, viz.: "It has been my experience that the trade will not buy on a falling market. It is only natural that dealers should postpone buying as long as possible, in the hope of further reductions." The jobbers are seeking to overcome the objection to prompt buying by pointing to their contracts with the manufacturers—such as have been in force for years—providing that, should any reductions in price be made before April 1 next, all buyers shall be given the benefit of the same when paying their bills. The present lower prices went into effect on March 15, and, under the terms of contracts not expiring until April 1, the United States Rubber Co. and the Boston Rubber Shoe Co. sent rebate checks to their customers, covering the difference between the old and new prices, and amounting to a sum estimated, for the first-named company, at $700,000.

TARIFF CHANGES IN CANADA.

A NEW customs schedule has gone into effect in Canada within the past few days. In lieu of a copy of the new act, THE INDIA RUBBER WORLD is in receipt of a letter from the minister of trade and commerce, at Ottawa, giving the new duties applicable to India-rubber and Gutta-percha, with the corresponding rates of the tariff of July 23, 1894. The sections in the new law of chief interest to the rubber trade follow:

"211. Belting of leather, rubber, or other material, not elsewhere specified, 20 per cent. *ad valorem*."

Under the old law, leather belting was dutiable at 20 per cent. and India-rubber or Gutta-percha belting at 32½ per cent.

"214. India-rubber boots and shoes, and all manufactures of India-rubber and Gutta-percha, not otherwise provided for, 25 per cent. *ad valorem*."

The old rate was 30 per cent. on arctics, gaiters, etc., and 25 per cent. on rubber boots and shoes without tops or uppers of cloth or other material. The rate on unspecified manufactures of India-rubber is unchanged.

"215. India-rubber clothing, and clothing made waterproof with India-rubber, rubber or Gutta-percha hose, and cotton or linen hose lined with rubber, rubber mats or matting, and rubber packing, 35 per cent. *ad valorem*."

The old rate on rubber clothing was 35 per cent. and, on the other articles in this section, 32½ per cent.

The above comparison may be summarized thus:

Duties lower on rubber belting and arctics.

Duties unchanged on rubber shoes and rubber clothing.

Duties higher on rubber hose, mats or matting, and packing.

President Warren, of the Gutta Percha and Rubber Manufacturing Co. (Toronto), in an interview in the Toronto *Globe*, said that he was satisfied that the new tariff is all in favor of the United States in the department of rubber belting. It was possible that they might have to close the belting department though they would not quit till forced to do so. The other branches of the trade are not materially affected.

The manager of the Granby Rubber Co. (Montreal) said to the *Globe* that the new tariff would not affect their business to any great extent. The articles most affected are shoes with cloth tops, the sale of which, he says, is decreasing.

Under the 1894 tariff the duties collected on India-rubber imports into Canada have amounted on an average to a fraction above 30 per cent. *ad valorem*. A computation in which the new rates are applied to the latest statistics of Canadian rubber imports in the possession of THE INDIA RUBBER WORLD gives an average of 29¾ per cent. *ad valorem*. But the imports of rubber belting have not exceeded $15,000 a year of late, and $5000 would cover the imports of arctics.

AN ODE TO PARA.

BY A RUBBER MAN, ON HIS DEPARTURE.

O CITY of rubber, *caboclos*, and mangoes!
Whose perfumes o'erpowering the senses enchant
O city of music, of ear-splitting *tangoes*,
I can't say I'm sorry to leave you. I can't!

Farewell to Pará, queen of the equator!
Good luck to you all in this rubbery town;
Here's a health to you all, in a drop of the "crather,"
May salaries go up, and *o cambio* go down!!

Pará, Brazil, March 12, 1897.

RECENT TRADE PUBLICATIONS.

INSTEAD of a single catalogue, or a price-list, of their products, the Vereinigte Berlin-Frankfurter Gummiwaaren-Fabriken (United Berlin-Frankfort India Rubber Co.), send us from Germany a collection of ten pamphlets and fourteen leaflets, each advertising some particular feature of their work; a calendar for 1897, on which is illustrated their display at the late Berlin industrial exposition; and a handsome little brochure, in the form of a practical treatise on the India-rubber industry, prepared for distribution at that exhibition. There is a catalogue of hose and belting, one of mats and matting, another of wringing-machines with rubber rollers; a catalogue of velocipede-tires, pedals, etc.; besides an especially handsome catalogue devoted to the "Elliot pneumatic" alone; an elaborate catalogue of surgical articles in hard and soft rubber; and so on. Among the circulars, one is devoted to steam-hose, and conveys the information that the company have the rights of manufacture in Europe under the patents owned by the Boston Woven Hose and Rubber Co. There are circulars devoted to rubber erasers, billiard-cushions, cash-mats, asbestos-rubber goods, and various other articles. If all the publications mentioned were bound together, the result would be a larger catalogue than we have yet seen issued by a rubber manufacturer. On another page of THE INDIA RUBBER WORLD this month is given some account of the history of this company and also some notes on its output.

[CATALOGUE OF BICYCLE-TIRES.] 1897. INDIANAPOLIS RUBBER CO. Indianapolis, Ind. [Paper. 4″×5¼″. 20 pp.]

THIS is a pointedly-written statement of the claims of the product of an important factory which has grown up in recent years in a convenient location in the central west, having reference to the great development of the bicycle industry in that section. Stress is laid in these pages upon the attention given to the details of manufacture of tires by the Indianapolis company, particularly with regard to the fabric used, the quality and the treatment of the rubber, and the method of vulcanization. The company manufacture the "Indianapolis" single-tube tire, under the Tillinghast patents, but it is asserted that detachable tires are making "rapid but steady growth in popularity," and considerable space is devoted to the "G. and J." tires, which they manufacture to an important extent.

PEORIA TIRES. PEORIA RUBBER AND MANUFACTURING CO., PEORIA, Ill. [Paper. 5¾″×8½″. 16 pp.]

SEVERAL pages of this attractively-printed pamphlet are filled with a "Description of Tire Machinery," illustrated with views of the principal machines used in the manipulation of India-rubber, together with the weaving-machine used in forming the fiber used in the "Peoria" single-tube tires. This company does not, like many others, buy its cotton fabrics from other weavers. Next is an illustrated description of the "Peoria" tire, intended to show how its construction leads to the possession of the various qualities claimed for it. This is one of the newest tire-companies in the field, having broken ground for their factory so recently as September, 1895, but they have made rapid headway, and are preparing for a large output this season, not only of tires but of complete bicycles.

PARANITE TIRES. MANUFACTURED BY INDIANA RUBBER AND INSULATED WIRE CO., Jonesboro, Ind. [Paper. 5⅞″×3½″. 14 pp.]

"PARANITE" single-tube tires are made in two styles—corrugated tread and diamond tread. This little catalogue is devoted to explaining the salient features of these tires, which have been on the market for several years. There is also an illustration of the "Electric" double-tube tire. The company manufacture an extensive line of India-rubber goods, not mentioned in this catalogue of the tire department. The company is owned in part by the parties controlling the Peoria Rubber and Manufacturing Co.

[CATALOGUE] NO. 7—1897. BELTING AND RUBBER GOODS. W. D. Allen & Co., No. 151 Lake street, Chicago, Distributing Agents Manhattan Rubber Manufacturing Co. [and] Gandy Belting Co. [Paper. 6¼″×10″. 256 pp.]

BESIDES a full line of products of the important rubber concern named on the title-page of this pamphlet, Messrs. Allen & Co. keep in stock a number of articles in rubber manufactured especially for their trade by other concerns—in some cases under contracts of long standing. The mechanical rubber goods department of their store embraces "everything from belting, hose, and packing down to all kinds of molded goods, including fire-hose, vulcanite emery-wheels, and everything that is ordinarily made at a first-class [rubber] factory." The facilities of this house include a brass foundry, which has been enlarged within a year, and from which a great many different hose appliances are turned out. No less than 24 pages of this catalogue are devoted to goods of this class alone, including lawn-sprinklers, hoze-nozzles, and the like of other makes kept in stock. Altogether, therefore, rubber and kindred goods figure in this catalogue to a marked extent. It is a convenient and well-arranged publication of its kind, and we commend it especially to dealers in mill supplies.

A DIRECTORY OF THE AMERICAN CYCLE TRADE (NOT INCLUDING agents). New York: The F. P. Prial Co., 88 West Broadway. [Boards, 7″×10½″. 70 pp.]

ONLY a half-dozen years ago, when one might almost have counted upon his fingers all the bicycle-factories in the United States, there was little need of a printed list of them to enable the trade to keep them all in mind. Now their number has so increased that the book before us gives the names of 318 separate corporations, firms, and individuals in the bicycle industry, together with their business addresses, the names of the wheels manufactured, and, in many cases, the names of leading officials of the companies. But it is not for its list of bicycle-manufacturers alone that such a directory is needed. No less than 83 per cent. of the total space in the book is devoted to the manufacturers of bicycle parts and accessories, arranged under more than 200 headings, yet including nothing but what seems to merit inclusion in the book. This directory has been compiled in the office of our contemporary, *The Wheel*, one of the oldest existing bicycle journals, and, so far as we are able to judge of the list of bicycle-factories, can be depended upon as accurate. We notice, however, under the heading of "Tires," that the Indiana Bicycle Co. is credited to Columbus, Ohio, while the Indianapolis Rubber Co., an important tire-making concern, is not mentioned. The binding of the volume is attractive, and the typographical make-up good, but if we could make a suggestion it would be that more than one kind of type should be used; the running into one paragraph of the name of a company, with its address, names of officials, brand of bicycles made, etc., without a break in the style of type interferes with ready reference to any given detail.

SAVE YOUR HORSE [DESCRIPTION OF THE GIBBS PATENTED RUBBER-CUSHIONED HORSESHOE.] The Whitman & Barnes Manufacturing Co., No 111 Chambers street, New York. [Paper. 5½″×6″. 20 pp.]

THERE are several styles of the Gibbs horseshoe, which appears to be taking the lead among rubber-cushioned shoes, and this booklet sets forth in an alluring manner the advantages claimed for their use. It is accompanied by several leaflets containing testimonials from parties who have used them largely.

CATALOGUE AND PRICE-LIST. RUBBER BOOTS AND SHOES. 1897-98. L. Candee & Co., New Haven, Conn. [Paper. 3¼″×6″. 63 pp.]

THIS catalogue differs from the edition of one year ago chiefly in the fact that new engravings have been prepared of all the styles of boots and shoes illustrated, with a very great resulting improvement. This year, as last, the pictures are half-tones, from photographs of the goods, but the later pictures are much clearer, and, one might say, more "life-like." The general features of the catalogue are the same as last year, but the typography is better, and it bears a more artistic cover.

CATALOGUE, 1897-98. RUBBER BOOTS AND SHOES. AMERICAN RUBber Co [Boston, Mass.] [Paper. 3½″×6¼″. 63 pp.]

THERE are more changes in the "American" catalogue than in those of some of the other rubber-shoe companies. New illustrations have been prepared, and the engraving is better done than in the past. A telegraph code, to facilitate ordering, concludes this book. An American eagle and a profusion of patriotic colors ornament the cover.

CATALOGUE OF WALES-GOODYEAR RUBBER BOOTS AND SHOES, 1897-98 Manufactured by Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. [Paper. 3½″×6¼″. 48 pp.]

HERE are the same cuts as last year, but they were distinct enough then, and there's no need of their being more so now. It might have been better, however, to print the cuts in black ink rather than in blue, as being nearer the color of the goods described. The list of styles is somewhat shorter than some other companies produce, but this is not regarded by the "Wales-Goodyear" as any test of quality. The artist who designed the cover has done his best to suggest "good rubber weather."

WOONSOCKET RUBBER CO. CATALOGUE [OF] RUBBER BOOTS AND Shoes, 1897-98. [Providence, R. I.] [Paper. 3½″×6½″. 63 pp.]

THIS is a very complete catalogue, well illustrated and well printed. New names have been given to the styles of all specialties. Their number has been somewhat reduced, also, eliminating several which were of the same general character and selling at the same price as other items left on the list. The number of styles of light goods in bulk is reduced, as compared with last year, from 32 to 25, and the number of styles in cartons from 45 to 31.

BOOTS AND SHOES. GROSS PRICE-LIST. 1897-98 GOODYEAR'S INDIA Rubber Glove Manufacturing Co., New York. [Paper. 3½″×6½″. 12 pp.]

THE list of products of this company differs considerably from that of the other companies. For instance, in addition to the customary line of boots, uniform in price with the general market, there is a special line of boots in cartons, listed 10 cents higher for each style. This company also continues the manufacture of tennis-shoes, which are included in this list. It is understood that the Rubber Glove company will not issue a catalogue this year, having issued a very elaborate one for last season, since which time there have been no changes in their output deemed sufficient to call for a new catalogue.

LYCOMING RUBBER CO. RUBBER BOOTS AND SHOES. PRICE-LIST, 1897-98. [Williamsport, Pa.] [Paper. 3¼″×5¾″. 12 pp.]

THIS Pennsylvania concern, the most westerly of those embraced in the United States Rubber Co., seems to cater to the trade of a particular section, and its list embraces several details departing somewhat from the uniformity observable in the lists of the other companies. There is a second-grade listed as the "Keystone brand."

CATALOG. RUBBER BOOTS AND SHOES, 1897-98. HOOD RUBBER CO., Boston, Mass. [Paper. 3½″×6½″. 44 pp.]

FROM the business-like appearance of this handsome publication, and from the character of its contents, it might be taken for the twentieth or fortieth, instead of the first, issued by the company. There is a full line of boots and shoes, with specialties in cartons, and second-grade goods branded "Old Colony Rubber Co.," all quite like a long-established concern, instead of a company concerning which the first decision toward organizing it was made on August 1, 1896. The illustrations suggest that the company's samples must be very attractive.

CATALOGUE AND PRICE-LIST OF RUBBER BOOTS AND SHOES, SEAson, 1897-98. Manufactured by the Toronto Rubber Shoe Manufacturing Co., Limited, Toronto. [Paper. 3½″×6″. 64 pp.]

WITHOUT the title of this pamphlet it could hardly be distinguished from the catalogues of the rubber companies in the United States. The size and general appearance are the same, the illustrations are very like those used in this country, the names of the styles are often the same, and there is absolutely no difference in list-prices. The discounts are smaller, however, which makes the Canadian rubbers cost more than in the United States. First-grade goods made by this company are branded "Maple Leaf" and the second grade "Columbia."

NEW BRUNSWICK TIRES, 1897. MANUFACTURED BY THE NEW Brunswick Rubber Co., New Brunswick, N. J. [Paper. 3½″×6½″. 16 pp.]

WHILE one of the oldest India-rubber concerns in the country, it was among the last to take up the production of bicycle and vehicle tires. As is well known, the shoe-manufacture of this company was consolidated with that of the United States Rubber Co. (New Brunswick), and the plant and the operatives thereafter employed in making tires. These goods, which have been mentioned frequently in THE INDIA RUBBER WORLD, are described in good style in this handsomely-printed pamphlet, including illustrations of the appearance of the "basket-tread" and smooth tires.

ILLUSTRATED CATALOGUE AND PRICE-LIST OF PERFECTION SOLID Rubber Type. The J. F. W. Dorman Co., Baltimore. [Paper. 6″×9¾″. 54 pp.]

THIS publication represents better than anything else we have seen the extent to which the rubber-type industry has grown. It is now possible to make rubber type practically of all sizes and styles, which can be arranged in holders to print numbers, sizes, prices, or other details on merchandise, to stamp papers in business, and for countless other purposes for which the cost of press printing would be too great. From the contents of this catalogue it is evident that the number of users of such type must be very large. This firm have patented a casting-machine for the metal molds for "Perfection" solid rubber type, besides which they catalogue a variety of type-cases, type-holders, and other appliances for the use their type.

MACKINTOSHES, RUBBER AND OIL CLOTHING. F. C. HOWLETT & CO., Manufacturers' Agents and Jobbers, Buffalo, N. Y. [Paper. 4¾″×7″. 40 pp.]

THIS is a comprehensive new announcement of *one* department of a long-established rubber house, in a city which is an important distributing center. Its appearance is coincident with the removal of the firm to a new, larger, and up-to-date store. The catalogue is fully illustrated, in addition to giving an extensive list of styles of men's and women's mackintoshes, men's and boys' rubber clothing, fire coats, rubber hats and caps and leggings, blankets, ice-aprons, horse-covers, gloves and mittens; also oiled clothing. The catalogue is rendered additionally complete by means of full instructions for ordering. The extent of the business is indicated by a list of ten salesmen, traveling throughout five states. The firm also keep in stock mechanical rubber goods and sundries, and they are selling-agents for Woonsocket and Candee rubber boots and shoes.

WHAT THE TRADE SAYS ABOUT "MASCOT" GARDEN-HOSE. Trenton Rubber Co., Trenton, N. J. [Paper 3¾″×3¾″. 32 pp.]

THIS is a new brand of hose, which is advertised in a novel way, by means of fac-similes of letters from dealers in all parts of the country who have given it a test, with satisfactory results. The letters speak for themselves, making it unnecessary for Treasurer Garcin to add anything beyond the fact that the same company produce various other brands of hose, for different purposes.

THE NEW CRUDE-RUBBER COMPANIES.

WHAT evidently is a direct outcome of a recent report by Sir Henry Dering, the British minister to Mexico, on the possibilities in the way of India-rubber cultivation in that country, is a new company registered in London under the title of India Rubber (Mexico), Limited. The capital is £406,000, in £1 shares, 6000 of which are deferred shares. The financial papers in London are filled with the optimistic estimates which have emanated from Mexico for several years past regarding the great profits from planting rubber, added to equally pessimistic forebodings anent the declining rubber supplies of the world. It happens that there are some *bona fide* rubber plantations in Mexico, induced originally by the offer of subsidies by the government, and the new company plans to begin operations by acquiring these, involving some 350,000 trees, said now to be available for tapping. The largest of these is the "La Esmeralda" plantation, which has been mentioned from time to time in THE INDIA RUBBER WORLD. The company's prospectus mentions also the "Llano de Juarez" plantation, on which "there are estimated to be about 250,000 Chicle or chewing-gum trees ready for tapping." The following is an estimate of the revenue for the first year:

3 pounds of India-rubber per tree, at 1*s.* 8*d.* per pound net from 350,000 trees	£87,500
2 pounds of Chicle gum per tree, at 1*s.* per pound net from 250,000 trees	25,000
6000 tons of cabinet timber at £2 per ton net	12,000
Profit from cocoa, coffee, etc., about	5,900
Estate's revenue	£130,400
Less administration, management, reserves, etc.	£35,000
Less debenture interest	14,000
	£49,000
Estimated net revenue	£81,400

The first directors are J. Greenlee, T. Richardson, R. L. Philpot, A. Drucker, W. O. Clough, I. J. S. Wood and W. Allen. George Angus & Co., of Liverpool, Newcastle-on-Tyne, and New York, are to be consignees for the company's products, and they have the right to nominate a director. Messrs. Angus & Co. have an extensive India-rubber factory at Newcastle, but their house in New York, at No. 95 Gold street, is devoted entirely to the leather trade. At that address THE INDIA RUBBER WORLD was informed that no advices had been received from London regarding the India Rubber (Mexico), Limited.

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THE Crude Rubber Co., the new Virginia corporation with several millions of capital, mentioned in the March INDIA RUBBER WORLD, does not appear yet to have become an important factor in the trade. The president is George S. Dearborn, a shipping merchant of No. 104 Wall street, New York. When a representative of THE WORLD called at that address recently, Mr. Dearborn was absent, but an interview was granted by Henry E. D. Jackson, of the same office, the vice-president and treasurer of the Crude Rubber Co.

"I would willingly give you some information," said Mr. Jackson, "if there was anything to report. I have consented to act as treasurer of the company, but have not thought of the matter since you called here in March."

Under the terms of the charter, the principal office of the company is at Norfolk, Va., which is given as the residence of two of the incorporators—William A. Young and James W. Wilcox. The name of the latter does not appear in the Norfolk City Directory; the name of Young is given, but without any occupation. When asked "Who is William A. Young of Norfolk?" Vice-President Jackson replied: "I don't know."

ANOTHER big new company with a Virginia charter is the Cia. Exploradora do Amazonas, with capital limited to $10,000,000, organized for the purpose, among other things, of dealing in India-rubber, rubber lands, etc. At No. 13 Astor place, New York, an INDIA RUBBER WORLD man found Samuel B. Lawrence, the vice-president of the company, in an office which serves, apparently, as the headquarters of more than one corporation.

"I really know nothing about the plans of this company," said Mr. Lawrence. "I do know that no active business has been done as yet. Our president, Mr. Perine and our secretary, Mr. Summerfield, probably could tell you nothing more at present than I can. Those interested who could explain more fully the objects of the company would not, I am sure, care to be interviewed at this time. Personally, I am not posted on the cultivation of rubber; how long does it take for the trees to grow up?"

When told that from eight to twenty-five years were required, according to the species, Mr. Lawrence said: "In that case, I don't think that the company would care to grow rubber trees." The secretary named is John B. Summerfield, a broker, at No. 62 Wall street. The president is a New Jersey man. Mr. Lawrence said that his company had no connection with the Crude Rubber Co., though some of its incorporators might be connected with that concern. It may be added that William A. Young, of Norfolk, Va., above mentioned, is also a director in the Cia. Exploradora do Amazonas, together with two others credited to Norfolk—N. Burruss a banker who failed on April 28, and J. H. Shields whose name does not appear in the Norfolk directory

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THE G. P. Brazil Syndicate, Limited, was registered in London on April 1, with a capital of £5000, in £1 shares, to acquire and develop the rights of Eugene Sérullas, so far as such rights relate to Brazil, in a process which he has invented for the extraction of India-rubber or other gums from the leaves of their respective plants. This process, applied originally to the extraction of Gutta-percha, in the East Indies, has been patented in several countries, including the United States. The title of the American patent reads: "No. 575,739.—Process of extracting and purifying Gutta-percha. Hippolyte E. Sérullas and Felix E. Hourant, Suresnes, France."

AN IMPORTANT DEAL IN TIRES.

THE United States Rubber Co., who for some time have been contemplating a material extension of their tire-manufacturing business, completed arrangements last week with the Consolidated Rubber Works (Boston), by which they become actively interested in the "Kangaroo thread" tire. This tire is made by machinery and, it is claimed, possesses valuable points as to speed, resilience, and durability. The "Kangaroo" has already made a name in local road races, and in coasting contests in and around Boston.

"An arrangement has been concluded," said General Manager Saunders, of the United States company, to THE INDIA RUBBER WORLD, "by which 'Kangaroo' tires will be manufactured at the factory of the National India Rubber Co., at Bristol, R. I., and this deserving tire will be pressed into the leading position its merits warrant."

It is rumored that the negotiations just completed have extended over some months, and also that several other parties were in the field for the "Kangaroo" aside from the United States Rubber Co. The Boston office of the Consolidated Rubber Works remains at No. 116 Bedford street for the present.

THE OBITUARY RECORD.

CHARLES M. CLAPP, who had been long identified with the India-rubber industry in New England, died suddenly at his home in Roxbury, Mass., on April 30, at the age of sixty-two. He was born at Watertown, N. Y., and received his early education at Colchester, Conn., after which he went to Boston and found employment in the rubber business. He was a bookkeeper for the Hall Rubber Co. When he began business for himself it was as a member of the firm of H. W. Burr & Co., of Boston. They operated the Ætna Rubber Works at Jamaica Plain, Mass., which Mr. Clapp later had sole control of, when he was joined by Robert D. Evans, now president of the United States Rubber Co., under the style of Clapp, Evans & Co. They manufactured clothing, carriage cloth, and wringer-rolls, and at one time did a jobbing business of $1,250,000 a year. After this connection was dissolved Mr. Clapp remained in control of the Ætna mill, which he operated until within a few years, maintaining a store in Devonshire street, Boston. Some two years ago Mr. Clapp retired from the rubber business. He was a director in the Atlas National Bank, a director of the E. Howard Watch and Clock Co., a member of the Commercial Club, of which he was treasurer for seventeen years, and a trustee of Forest Hills cemetery for a quarter of a century. He was prominent in Masonic circles, and was a Knight Templar of high rank. For many years he was a member of the Church of the Unity, and was chairman of the standing committee. He was a generous benefactor of the poor, and his charity knew no bounds. A widow and two daughters survive him.

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CHARLES GODDARD BALL, who had many friends in New York, died at the mouth of the Congo on March 14, from dysentery contracted on the upper river. He left this country in January, 1896, having signed a three years' contract in the service of the Congo state. In July he reached Nyangwe, about 1700 miles up the river, once famous as an Arab center, and the point where Stanley began his descent of the river. At Nyangwe he began his work, which was to purchase rubber and ivory. He dealt directly with the natives, and his fair treatment of them won their regard. In October he was promoted, at an increased salary, to be rubber examiner for the Manyema Zone, the large district between Nyangwe and Lake Tanganyika. Before he could enter on his new duties he was attacked with acute dysentery, and was sent down the river to Stanley Falls to be treated by a physician. A letter from him dated January 2 last spoke hopefully of his prospects. As he died at the mouth of the river, he was probably on his way home to recruit his health. Mr. Ball was only about twenty-six years old, and was a native of Winona, Minn., where his mother, Mrs. Emma C. Ball, resides. He was engaged in business, at different times, in New York city and Brooklyn.

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WILLIAM WILLSHIRE RILEY, who died on April 8, near Middletown, Conn., aged 81 years, was often spoken of as the inventor of India-rubber plates for artificial teeth. United States patent No. 8533 was granted to him on November 18, 1851, for "attaching porcelain teeth to gum plates," and his invention came into such general use as to yield a liberal income from royalties. Mr. Riley obtained patents for several other inventions, not related to rubber, which also proved successful and profitable. The deceased was the son of James Riley, who, born on a farm near Middletown, became a famous sailing master. The most notable adventure of the latter is recorded in a bulky volume published in London, in 1817, under the title: "Loss of the American Brig *Commerce*, wrecked on the Western coast of Africa in the month of August, 1815, together with an Account of Tombuctoo, and of the Hitherto Undiscovered Country of Wassanah. By James Riley, late Captain and Supercargo."

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A. MACKINTOSH WILLIAMSON, of recent years a resident of Philadelphia, and formerly long identified with the carriage industry in Baltimore, Md., died in New York on March 22, in his eighty-second year. He was identified with a patent rubber cushion for carriage-wheels and at the time of his death had pending a patent for a rubber tire for which he claimed that it would overcome the objectionable features of the solid tire as well as those inherent in the pneumatic tire. It was designed to aid horseless vehicles in climbing grades. During the civil war Mr. Williamson made several diplomatic visits to Europe, at the instance of Jefferson Davis, in the interest of the southern cause.

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WILLIAM W. CROSS, of Brockton, Mass., who died on April 25, in his sixty-fifth year, was the president of the board of the Standard Rubber Corporation, of that city, until last year. He was a wealthy man, identified with many important business enterprises in Brockton.

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W. L. CARR, a traveling salesman employed by the Hartford Rubber Works Co., died suddenly at Hartford, Conn., on April 3, of apoplexy. He was about 35 years of age, and had a family at Mansfield, Ohio, whither his body was sent.

THE MESSRS. HODGMAN AGAIN IN CONTROL.

ON April 24 an order discharging the receiver for the Hodgman Rubber Co. was signed by Justice Dykman, of the New York supreme court, Westchester circuit. The fact of the Messrs. Hodgman having succeeded in effecting a settlement with all their creditors was reported in the last INDIA RUBBER WORLD. The receiver, Robert W. Todd, having filed a report with the court, and a petition for his discharge, his accounts were placed in the hands of a referee, who made a report confirming that of the receiver, whereupon the above mentioned order was entered.

Mr. Todd reports that while he had charge of the affairs of the company a large volume of business was done, involving the consumption of a great deal of stock, and that the company resume control of their business with an encouraging list of orders, and with the confidence that they retain the patronage of their past customers to an important extent. The expenses of the receivership are said not to have exceeded the saving in rentals effected during its continuance. Within the near future a reorganization of the Hodgman Rubber Co. is probable, involving the accession of some additional capital.

The Hodgman Rubber Co. have completed an arrangement with the Cable Rubber Co., No. 28 Essex street, Boston, whereby the latter become the company's selling-agents for New England, on all the Hodgman lines—mackintoshes, sundries, and bicycle-tires. The Cable company will carry a stock of the same character as that formerly carried in the Hodgman branch in Boston.

IN discussing a new motor carriage brought out at Newcastle, England, the *Chronicle*, a local paper, says: "Probably something more than the rubber-tired wheels will be required to save the motor itself from the effects of the shock and concussion of rough roads, and perhaps in future carriages, a similar arrangement of springs to that which protects the body of the carriage, will be fitted to the motor."

MACKINTOSH GOODS AND OTHER WATERPROOF FABRICS.

THE mackintosh trade has been, in the past, the branch of the India-rubber industry generally supposed to be most liable to be affected by the tariff. So far as the production of articles of India-rubber is concerned, most of them had their origin in America, and no foreign country has ever yet found itself in a position to meet American tastes in these goods, with or without protection, on this side the ocean. But before the present stage of development in textile manufacturing had been reached in the United States, and when fabrics were largely imported for the manufacture of waterproof clothing, naturally the rate of duties on such fabrics was one of constant interest to the trade in this country. Of late, however, the production of fabrics suited for waterproofing has progressed so far in the United States that it would hardly come to a standstill, no matter what tariff changes might occur. The situation may be said to be analogous to that in the tin-plate industry, the failure of which was loudly predicted in case the McKinley rate of duties should be cut down, but which continued to grow in volume after the duties were reduced, as rapidly as at any time in the past. In other words, the manufacture of American fabrics for the mackintosh trade has become too firmly established to be uprooted by any tariff tinkering one way or another.

But it happens that the tariff revision now slowly progressing at Washington is in the direction which the American manufacturers would naturally be expected to favor. It is hardly worth while to go into details here with regard to the pending Dingley tariff law. It may be remembered that, three years ago, when another tariff bill had been passed by the lower house of congress, THE INDIA RUBBER WORLD compiled a table showing the extent of the changes from the then existing law; but, while the paper was printing, no less than 403 amendments to the bill were offered in the senate, and not a few of these were adopted, thus changing the whole tenor of the bill. It will be time enough for THE INDIA RUBBER WORLD to discuss the details of the new law after it has gone to the president for his signature.

It may be said, however, that the whole *raison d'etre* of the bill and the indications of the debate point to increased duties, and that woolens and clothing will certainly be higher. As a rule, the items in the Dingley bill, in its original form, provided lower duties somewhat than the famous McKinley law of 1890, but still there is an advance. In certain quarters something of this kind will be welcomed, not because of any desire for protection, in the ordinary sense, but because prices of mackintosh goods have been at a very low figure for the past year or two, and a slight advance in the tariff might serve as a peg by means of which the wideawake salesman could pull up prices somewhat. There is no doubt that the effect of the pending tariff bill has been discounted somewhat already in the regular clothing trade. There has been an encouraging number of buyers in this line in New York of late, and it is reported that the prices paid indicated a healthier and more legitimate tone in the clothing business.

Stocks of fall and winter goods in the hands of retailers are believed to be light, as a rule, nearly every one having "sailed close to shore" last year, being animated with a desire to reduce stock, and therefore buying as little as possible. At the same time our textile mills are adhering more closely to the policy of not making goods for stock, and not manufacturing more cloth than they have orders for. By thus avoiding overproduction, the manufacturers have sought to contribute to more stable conditions as to prices of fabrics. This may not be a welcome fact to the manufacturers of waterproof garments, unless, as has been intimated above, advantage can be taken of existing conditions to stiffen their prices somewhat. The selling-agent of a large rubber-clothing concern, when questioned on this point for THE INDIA RUBBER WORLD, expressed the opinion that a rise in prices in his line could hardly take effect, under any circumstances, in connection with the coming fall and winter trade. The reason advanced was that so many orders had been accepted already at the low prices prevailing for a year or two past that it would be practically impossible to exact higher prices as the season advanced.

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ONE effect of the great development of bicycling has been an increased demand, especially by women, for fabrics that will not be injured by use on the road, and, especially, that will shed water in case of a sudden shower. A considerable number of cloths have been offered by the trade for this purpose, but without affording a very great variety. For the most part they are serges that have been treated chemically in the dyeing and finishing processes, and the best of them show as good a finish and a finer feel than the same stuffs without the treatment. The fabric came to America originally from Bradford, England, under the name of "cravenette," which name is patented, but there have been imitations in this country, under various names, that are declared by authorities on textile products to be in every way as good as the original.

The test for goods of this class is very simple. A bag is made of the material to be tested, filled with water, and allowed to hang overnight. If no water leaks out, and the cloth, on being emptied and shaken, shows no sign of having been wet, the test has proved satisfactory. These goods are being used for ladies' dresses, for waterproof—or at least shower-proof—garments, and also for men's light-weight suits. It is reported that bicycle suits for both sexes are being made of these shower-proof goods to a considerable extent this season. The secret of the treatment of these cloths has been well guarded, everything considered. Besides the "cravenette" goods, there are cloths on the market known as "pleuette," "shower-proof," "rain-proof," etc.

As we have reported in THE INDIA RUBBER WORLD in former years, the leaders in the mackintosh trade in America are not agreed in their attitude toward these non-rubbered fabrics. Thus, after visiting the offices of a concern who reported a good demand for cravenette garments, which they manufacture in connection with mackintoshes, an INDIA RUBBER WORLD man met together representatives of two important concerns in the trade who declared that none of the chemically waterproofed goods could come into real competition with mackintosh garments. When people want a waterproof garment, these gentlemen said, they want something that can be depended upon to actually keep out water no matter in what quantities. Cravenette and other similar goods will not do more, they averred, than merely turn off a light summer shower. The claim that cravenette goods are lighter than mackintoshes they denied, while asserting that any fabric that is truly impervious to water will retain perspiration, so that, in their estimation, the cravenette garment has no advantage over the mackintosh, while lacking its chief virtues.

There has lately been brought out in London an addition to

these waterproofing processes without rubber, known by the name of "pegamoid." A crystal-clear gelatinous fluid is applied to the material to be treated, whether woolen, cotton, silk, leather, or paper, rendering it, according to the claim of the promoters, impervious to the influence of humidity, acids, oils, or fatty substances, and this without depreciation in value or appearance. No goods manufactured by this process have been offered yet in this country, but an American company is being formed with a view to making a notable demonstration of the advantages claimed for it. The father of this American company, so to speak, is Joseph J. Byers, whose "epauletted ventilation" for rubber coats, brought out some ten years ago, has had considerable vogue in Europe. Mr. Byers is expected shortly to return to America, after an absence of nine years, to devote himself to exploiting here the "pegamoid" process, not only for waterproof cloths, but for other materials as well. As soon as more thorough tests have been made, THE INDIA RUBBER WORLD will have something further to say regarding the new material.

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THERE has been a constant effort from the beginning, on the part of the makers of mackintoshes in this country, to improve all the details in quality and appearance of their product. They have been assisted in this direction not a little by sewing-machine manufacturers. Now no mackintoshes are made up by hand. Even if the peculiar character of the materials to be sewed did not preclude hand-sewing in many cases, the cost of such sewing would be so great as to prevent the sale of a good quality of goods at prices within the reach of the average buyer. It might be supposed that by this time nothing remained to be invented in the sewing-machine field. And yet, while visiting one of the stores of the Singer Manufacturing Co., an INDIA RUBBER WORLD man was informed that a modification of their button-hole machine was being made, with a view to giving button-holes the same finish on both sides—a point which is almost indispensable in a really well-finished garment.

The Wheeler & Wilson and the Standard sewing-machine people also manufacture button-holing machines, together with the Reese Buttonhole Machine Co. Last of all, is a new concern in Boston, organized to manufacture a new button-holing machine, of which an experienced rubber-manufacturer writes to THE INDIA RUBBER WORLD:

"It is in my opinion the best button-hole machine on the market, and finishes both sides in exactly the same manner as a hand-made button-hole. In fact, it gives an even better appearance, which is not the case with other button-hole machines that I have seen."

A volume might be written of button-hole machines alone, each make of machine having its peculiar characteristics and every clothing manufacturer his pecullar requirements. In a mackintosh factory where a machine of another make outranked the Singer machine two to one, it was stated that the other machine did its work more rapidly, and with results apparently as good. In fact, the machine was said to finish the buttonhole, whereas, in the use of other makes, the operator was obliged to take the work in hand and "tack in" the thread-ends at each button-hole. But the machines in question were "set" for button-holes of a given size, and several hours were needed to change to another size, whereas the Singer machine was capable of being adapted readily to any size of button-hole. It was for this reason, the manager said, that the Singer was brought into use by them—facilitating the work where a variety of sizes of button-holes required to be made within a brief time.

The cost of machine-made button-holes is extremely low The contractor for work may pay as high as sixty cents for 100 button-holes, but his operatives receive only eight cents per hundred. But as 2000 can be worked in a day of ten hours, the operator has a chance to earn $1.60 per day. The contractor supplies the machines and keeps them in condition, supplies the thread, etc., and superintends the business, managing to reserve something as a margin of profit. The economy of machine work compared with hand work is shown by the fact that button-holes by hand cost two cents each.

There are certain difficulties to be encountered in adapting machines to work on mackintoshes. One is due to the sticky nature of the rubber, under certain conditions. Thus a double-texture mackintosh, made and button-holed "green," would make hard work for the operator at the machine, owing to the frequency with which it would be necessary to stop to prevent the needle and other portions of the machine from clogging. Another difficulty relates to the tendency of the needle to become heated in sewing thick and heavy material, whether India-rubber or otherwise. This has been overcome by a device which supplies a very small amount of oil to the thread used in sewing—so small, indeed, that it disappears on coming into contact with the heated needle, being nicely calculated to simply lubricate the needle, and preventing bad effects from its heating, while not being sufficient in amount to spread to the rubber and cause injury to that. There are practically no button-hole machines made for use in rubber factories alone. Machines having the same general details are used for sewing button-holes in all sorts of material. But there are differences between the machines for sewing button-holes in different garments, quite as marked as the differences between machines for sewing on different materials.

TWO DINNERS TO MR. HAYWARD.

ON the recent return from Europe of Mr. J. Francis Hayward, the Boston rubber-man, a reception and dinner were tendered to him by the employés of the various stores of which he is at the head. The dinner was given at the United States Hotel, in Boston, on April 2, and was attended by employés of the Lowell Rubber Co., the Hope Rubber Co., (Providence, R. I.), the Lawrence Rubber Co., and the Fall River Rubber Co. The toastmaster was Mr. Isaac Crocker, of the Lawrence store. Speeches were made by many of those present, Mr. Hayward responding gracefully and at considerable length. The program was concluded by Mr. George E. Hutchins, of the Lowell store, who on behalf of the whole body of employés, presented a valuable diamond to Mr Hayward. The menu-cards were most attractive, in respect both to their appearance and the suggestion of the nature of the cuisine.

Earlier mention should have been made in these pages of a complimentary dinner tendered to Mr. Hayward at the Hotel Vercelli, Boston, on January 15 last, by his business associates and employés, just prior to his departure for Europe. There were present upon that occasion, among others, the officers of the Cable Rubber Co. (Boston) of which Mr. Hayward is treasurer. A pleasant feature of this occasion was a musical program rendered by the Megatherian quartette.

THE factories of the National India Rubber Co. (Bristol, R. I.) since 1891 have been assessed at $100,000, under an agreement with the town authorities, intended by the latter to encourage new manufacturing enterprises. The agreement has some time yet to run, although the value of the factory property is now estimated at nearly $1,000,000.

SUCCESSFUL RUBBER SUPERINTENDENTS.

II.—MAURICE C. CLARK.

THE superintendent of the rubber boot and shoe factory of the Joseph Banigan Rubber Co.—Maurice C. Clark—was born on December 17, 1859, in Stratford, Conn. He attended the common school in his native town until the end of his thirteenth year, when he left home to work as clerk in a grocery store, where he was employed for several years and laid the foundation of a good business education. At eighteen he started to learn the pattern-makers' trade with the Birmingham Iron Foundry (Derby, Conn.) He remained with that company three years, studying practical drawing and securing a general knowledge of foundry and machine-shop practice. He then secured a position with the Pacific Iron Works, engine-builders, of Bridgeport, Conn., where he remained for about a year, when he returned to the Birmingham Iron Foundry to take charge of the pattern shop, in which he had been so recently an apprentice. He remained foreman of the pattern shop until 1885, when he became superintendent of the Birmingham works.

MAURICE C. CLARK.

In his new position Mr. Clark had full charge of the building of the India-rubber machinery turned out at Birmingham and in the course of time he devised a number of improvements in machinery of this class, upon which he obtained patents. He probably built machinery for every rubber mill of any account in the United States and for some mills in Europe. In 1889 he started upon the work of building the machinery to equip the "Alice" mill at Woonsocket, R. I., a mill planned by a wealthy and successful concern as the world's model rubber-shoe factory.

Upon completing the machinery for this mill he received an offer, which he accepted, of employment by the Woonsocket Rubber Co., to take charge of their boot mill at Millville, Mass., where he made many improvements and introduced improved machinery and methods. He held this position until August 1, 1896, when he resigned to become identified with the Messrs. Banigan in a new enterprise, they having parted company with the Woonsocket company. Mr. Clark drew the plans for the machinery for the Joseph Banigan Rubber Co.'s plant at Providence and also plans for additions and changes involved in converting the Saxton Worsted Co. property into a modern rubber boot and shoe factory.

Mr. Clark's thorough mechanical knowledge has been of undoubted advantage to him in the conduct of large manufacturing operations. A man capable at once of drafting plans for the machinery of a new factory, of making the machines, if necessary, and of installing them, will appeal to every one as better qualified for the position of mill-superintendent than a man whose only knowledge of machinery has been gained in the mill-rooms alone. This extra qualification is one which ought to attract the interest of any one who is looking forward to winning a position as superintendent of an important factory.

ANOTHER RECEIVER AT TRENTON.

THE Trenton Rubber Co. is again in the hands of a receiver. On April 8 Vice-Chancellor Reed signed an order appointing John T. Bird—a former vice-chancellor at Trenton—temporary receiver, and citing creditors and stockholders to appear on April 20 and show cause why the receivership should not be continued. The application for the receiver was made by Mrs. Sarah J. Magowan, stepmother of Frank A. Magowan, president of the Trenton Rubber Co., who alleges that the company is indebted to her in the sum of $34,000 cash advanced; besides which Mrs. Magowan has lent to the company a large number of shares of stock of the Trenton Rubber Co. and other corporations, which has been pledged for its indebtedness to other companies. Mrs. Magowan says in her bill that she is informed that suit has been brought against the company upon a promissory note, and that the liabilities of the company exceed its resources. On April 20 the vice-chancellor signed an order making Mr. Bird permanent receiver. This was opposed by counsel for President Magowan, who asked for a postponement, on account of negotiations looking toward concert among members of the company, but the vice-chancellor said that he could not longer keep the receiver in a temporary position. It is the wish of the principal creditors that the plant be continued in operation, and the receiver has authority to issue certificates to carry on business.

The first occasion on which the Trenton Rubber Co. went into the hands of a receiver was on August 3, 1895, when John D. Rue, a retired merchant of Trenton, was appointed. This was during the absence from home of President Magowan. On September 25 an order was signed discharging the receiver, at which time Mr. Magowan's solicitor stated that the smaller creditors of the company had been paid, and that the larger ones had signed a petition to the court praying that the management of the company be placed again in the hands of its president. Notes were given for four, eight, twelve, and twenty-four months. The Trenton Rubber Co. dates from 1880. It was incorporated May 6, 1886, with capital amounting to $100,000, increased in 1887 to $200,000. Frank A. Magowan, president, and William P. Hayes, secretary-treasurer of the company, were recently reëlected.

PRINTING WATERPROOF FABRICS.

A WELL-KNOWN difficulty in printing India-rubber goods, says *The Textile Recorder* (Manchester), is that these goods will not receive the color from the roller unless a rough surface has previously been imparted to them by powdering with farina, bone-ash, or some similar medium. It appears from a recent publication that the same object can be attained by spreading over the rubber surface a thin and even film of water, which can easily be effected by the help of a simple contrivance attached to the printing-machine.

INDIA-RUBBER MATTERS IN COURT.

JOHN BOYD DUNLOP, the Dublin bicycle-tire inventor, lately brought suit against a Dr. F. F. MacCabe, alleging fraud in a transaction in shares of the Pneumatic Tyre Co. Dunlop's story was that MacCabe, with whom he had been on terms of friendship, came to him in behalf of an anonymous third party who was anxious to buy 2000 shares in the Tyre company and was willing to pay £7 each, though the market price was only £6 11*s.* 3*d.* Dunlop at first declined to sell, but on MacCabe's second visit, with a letter from Mr. DuCros, the chairman of the company, relative to the value of the shares, he made a transfer of 2000 of them, receiving a check for £14,000. On handing over the check MacCabe, it is alleged, asked that it be not presented for a day or two, until the anonymous purchaser should have time to deposit funds to meet it. A few hours later Dunlop shares were posted at £8 5*s.*, on vague rumors of the £3,000,000 Hooley deal, and when this was confirmed the shares reached £12 10*s.* The difference between £7 a share and the highest price named was more than £10,000. It is alleged that MacCabe's first visit to Dunlop in this matter occurred but a few hours after the negotiations closed in London for the syndicating of the Dunlop company, and that MacCabe had a hint of that transaction; that the shares were sold in MacCabe's name for £12 10*s.* each; and that it was Mr. Du Cros's check for £14,000 to MacCabe that enabled him to pay Dunlop, MacCabe himself not being a man of means. The plaintiff's action was to recover the unsold shares, if any, and to obtain an account, and also for damages.

On the other hand, MacCabe denied all fraud and that he had any knowledge of the Du Cros arrangement with Hooley, and he also disputed the charge that the purchase was alleged to be for a third party.

The vice-chancellor delivered judgment in favor of the plaintiff. That a letter was written by Du Cros to MacCabe, which was produced by the latter to Dunlop immediately preceding the transfer of shares, was not disputed in court, though there was very great controversy as to its contents, the letter not having been produced. It was his lordship's judgment, however, that the letter was intended to produce, and that it did produce, in the plaintiff's mind the idea that Du Cros regarded it as an act of prudence to sell Tyre shares for £7 whenever they would fetch so much, and that the sale was thereby procured by fraud. It was agreed that a stay should be put on the order of the court, pending an appeal, on £7500 being lodged. The trial attracted much attention throughout, and the decision was received with applause in court.

* * *

THE case of Samuel P. Colt, assignee of the old National Rubber Co., against the Sears Commercial Co., of New York and London, which had been pending for several years, was decided on April 30 by the appellate court at Providence, R. I., in favor of the defendant. This was the last of several cases growing out of the same matter, all the decisions being adverse to the rubber company. Certain bonds were issued by the National company on September 20, 1887, to the Sears Commercial Co., and after the company made an assignment, Colonel Colt, as assignee, claimed that the bonds had been given as a preferred claim to creditors, and were therefore void. The court decided otherwise, however, and that the claim must be paid. The history of the case really dates from July 22, 1884, when the National Rubber Co. mortgaged its manufacturing estate to the Rhode Island Hospital Trust Co. to secure an issue of bonds. In the course of time suit for foreclosure was brought by J. Louis Schaefer, of New York, as the holder of forty-two of the bonds referred to, of the par value of $24,000, with accrued interest. This suit was defended on the ground that Schaefer held the bonds without any consideration paid by him, in trust for parties against whom the rubber company held claims in set-off to an amount greater than that due on the bonds, and that suit had been commenced for the recovery of the amount due. Schaefer was a clerk in the employ of W. R. Grace & Co., which house sustained close relations with the Sears Commercial Co. The amount of the bonds was, at the last, only $17,500, the difference between this and the amount named above having been paid under former decisions of the court.

THEY WANT TO BE LET ALONE.

AT the recent tariff hearings at Ottawa, Canada, by a parliamentary commission, a delegation of rubber-manufacturers was introduced by Mr. Niel McCrimmon, of Toronto. In brief, they desired to be let alone. With the exception of the Canadian Rubber Co. of Montreal they have not averaged 3 per cent. Their protection had been reduced in 1894. The prices their goods were sold for were smaller by from 30 to 70 per cent. than they were some years ago. There are three rubber factories and two in course of construction. There was invested $2,500,000 capital with $1,250,000 in plant. They employed 2000 people. They protested against frequent changes in the tariff. Their business was now at a standstill in consequence of the uncertainty. A bad tariff with stability was better than one with frequent changes. They did not want any increase in the tariff. They were going ahead whatever the government did. These gentlemen made no threats of closing up, says the Montreal *Witness*, and did not whine about not being able to hold their own against outside factories, and consequently made a good impression.

APRIL TRADING IN RUBBER STOCKS.

TRANSACTIONS in Rubber on the New York Stock Exchange during the last month were exceptionally small, especially with respect to "common." Prices advanced, however, above the figures ruling during March. In the table below is shown the movement in Rubber stocks by weekly periods during April; also for the same months in previous years, back to the incorporation of the United States Rubber Co.:

LISTED ON THE NEW YORK STOCK EXCHANGE.
201,660 shares Common=$20,166,000.
194,005 shares Preferred=$19,400,500.

DATES.	COMMON			PREFERRED.		
	Sales.	High	Low.	Sales.	High.	Low.
April 1-3, 1897....	550	14½	13	464	63⅛	62½
April 5-10	810	16½	15	2,283	65½	63¼
April 12-15, 17....	800	16	15	1,160	66¼	64¾
April 19-24.....	623	14½	14	288	65¼	65¼
April 26, 28-30...	410	15	13¾	1,345	64	63⅛
Total, April.....	3,193	16½	13	5,540	66¼	62½
April, 1896.....	7,514	28	25¾	1,852	87¾	85
April, 1895.....	22,595	41⅜	39	8,416	94½	93
April, 1894.....	2,659	43½	38½	11,292	92½	89
April, 1893....	25,625	60⅝	53⅜	3,251	99½	94¾

THE Hon. E. S. Converse has been re-appointed a trustee of the soldiers' home at Chelsea, by the governor of Massachusetts.

TRADE AND PERSONAL NOTES.

THE fifth annual meeting of the stockholders of the United States Rubber Co., for the election of directors and for the transaction of any other business which may properly be brought before it, will be held at the office of the company, in New Brunswick, N. J., on Tuesday, May 18, at 12 o'clock M. The transfer books of the company will be reopened on May 19.

=W. A. McGraw, a wholesale dealer in rubber boots and shoes at Detroit, Mich., has organized a leather-shoe jobbing-house in that town, incorporated as the Michigan Shoe Co., with $100,000. The name of E. S. Converse, of Boston, appears in the list of stockholders, credited with 1000 shares, which appear to be of $25 each.

=Shares of the Gutta Percha and Rubber Manufacturing Co. (New York) of the par value of $100,000 were included in the estate of the late Mrs. Elizabeth Fogg, whose bequests, after five years of litigation, have lately become available. By the terms of her will the shares mentioned were to be disposed of and the proceeds divided among several charitable institutions. The shares have been acquired by the surviving shareholders of the Gutta Percha company. The husband of the testatrix, the late Wm. H. Fogg, was one of the original members of this company, though not interested in rubber-manufacture except as a capitalist. He was a wealthy man and some time president of the China and Japan Trading Co. (New York.)

=The business of Frank C. Tuttle, a rubber-goods dealer at New Haven, Conn., whose assignment was reported in the last INDIA RUBBER WORLD, is in process of litigation in the probate court. Colonel Frank T. Lee is the trustee.

=The Rhode Island Supply and Rubber Co. (Providence, R. I.), have made an assignment, for the benefit of their creditors, to Moses W. Brown. The business was started about twenty years ago, embracing fire supplies exclusively. In 1892 the business was transferred to the Rhode Island Coupling and Rubber Co., who became embarrassed, paid their debts with endorsed notes, and, in turn, were succeeded by the Rhode Island Supply and Rubber Co., incorporated in January, 1895, with Andrew J. Crossman president, Alfonso D. Marsh secretary-treasurer; and Moses W. Brown, manager. They dealt mostly in mill supplies, the fire-department business having been sold out. The assignment was due to the maturity of the notes above mentioned.

=The Omaha house of E. G. Stearns has been succeeded by E. H. Sprague & Co., who will make a specialty of Wales-Goodyear and American rubbers, besides carrying a full line of mackintoshes, tennis goods, and miner's supplies.

=The Rubber Soled Leather Shoe Co. (Boston), reported last month as having bought the idle Tripp factory at South Framingham, Mass., have acquired 15,000 square feet of adjacent ground, with the idea of adding new buildings. The plant is to be fitted for the complete work of the concern, including machinery for manipulating rubber. The first annual report of the company reports their assets: Land, $3000; buildings, $11,000; machinery, $30,000; cash and debts receivable, $2700; patent rights, $1,000,000; total, $1,046,700. The company are capitalized at $1,000,000.

=The Indianapolis Rubber Co., (Indianapolis, Ind.) had one of the most notable exhibits at the recent very successful Indianapolis cycle-show. The processes of tire-making were shown in detail, from the receipt of the crude India-rubber to the turning-out of finished goods.

=A short time ago an engineer in a large factory called the attention of a visiting expert electrician to the electricity in a big driving belt, and was quite surprised when the expert informed him that the electricity was caused by the belt slipping. The expert added that it was simply a wasting of power and could be prevented by applying Dixon's traction belt dressing, made by the Joseph Dixon Crucible Co. (Jersey City, N. J.) This dressing was applied and the electricity disappeared at once. Electricity in belts is not only a waste of power, but is also an element of danger by fire.

=It was announced last month that the interest of the Messrs. Oppenheimer in Oppenheimer, Hofeller & Co., dealers in old rubber, rags, etc., at Buffalo, had been purchased by their partners, who would continue in business as Theodore Hofeller & Co. The senior member of the old firm, Mr. A. Oppenheimer, and his two sons, Nathan and Walter, who were also members of the old firm, have since associated themselves under the style of Oppenheimer & Co., and are having a new warehouse for the rubber and rag business built at Nos. 152-154 Oak street. It will have four stories and basement, 40 × 103 feet.

=Mr. Richard H. Pease, the Pacific coast representative of the United States Rubber Co., in addition to being at the head of the Goodyear Rubber Co. in San Francisco and Portland, Ore., who has been in New York for several weeks past, expects to return within a few days.

=The new factory at Bristol, R. I., of which Terrence McCarty is general manager, has begun work. Only a few hands are now employed, on druggists' sundries, mats, footballs, etc., but the number is to be gradually increased, and it is expected that shoes will be added to the list of products. The company owning the plant have not yet been permanently organized.

=The Boston Woven Hose and Rubber Co., beginning on April 26, are running their bicycle-tire plant all night. There are two complete forces, one working from 7 to 6 during the day and the other from 7 to 6 at night. They are obliged to do this to meet the orders for "Vim" tires.

=The Gregory Spring Tire Co. (Atlanta, Ga.) have been incorporated by W. B. Gregory, J. G. Isbell, and J. W. Varley, to manufacture a non-puncturable tire. The capital is $100,000.

=The Diamond Rubber Co. (Akron, Ohio) have paid a handsome compliment to their leading customers in the sundries line by presenting each with a copy of their new catalogue of druggists' goods, bound in leather, with a *fac simile* of the recipient's autograph neatly done in gilt on the outside.

=The rubber-tire industry has been particularly active of late in Akron, Ohio, which has become an important center of this trade, and where some of the factories have been obliged to run day and night.

=The Goodyear Vulcanite Rubber Works (Morrisville, N. J.) were closed for a few days recently by a breakdown, and since work has been resumed it has been necessary to run the factory until 9 o'clock at night to keep up with orders.

=John F. Burke, an employé of the National India Rubber Co. (Bristol, R. I.), sued the company for damages from the loss of a hand, in a machine which, he claimed, was not guarded properly. The jury awarded a verdict for $2000.

=Julius Kahn has resigned his position as selling-agent for the Manhattan Rubber Manufacturing Co. (New York) to become connected with the Phillips Rock Drill Co. (Philadelphia), whose New York office is at No. 147 Cedar street.

=The Whitman & Barnes Manufacturing Co. (Akron, Ohio) report an active business at their New York office, No. 111 Chambers street. Their Gibbs patented rubber-cushioned horseshoes are now used on the horses of the New York fire-department, and on the ambulance horses in that city. All the horses used in the Barnum & Bailey street parades are shod with the Gibbs shoes, and many horses in the parade on Grant day in New York were similarly equipped.

=R. H. Griffin, selling-agent for the New Brunswick Rubber Co., reports an active demand for their bicycle-tires. The bicycle trade appears to him in sounder condition than at this time last year, and he looks for a largely increased output of wheels. He reports the sale of his company's "basket-tread" or rough-tires, in comparison with the smooth ones, in the proportion of two to one.

=William Morse & Co., the New York rubber jobbers, have added to their already extensive quarters, at No. 72 Reade street, the second floor at that number. This will be devoted to mackintoshes and rubber clothing, the first floor and basement being occupied exclusively by rubber boots and shoes. They will carry the "India-Rubber Glove" line of footwear this season, in addition to the "American" and "Pará" lines.

=The Texas Hose, Rubber and Belting Co. (Galveston, Texas), headed by A. d'Laskey, talk of putting in a $15,000 plant at West Galveston for the manufacture of hose, the machinery to be used being in part the invention of Mr. d'Laskey, who hails from Boston via San Francisco.

=An export-trade item of interest is that an order has been received from a leading South American city for 10,000 feet of "Test" fire hose. This brand represents the latest and best ideas in fire-hose construction, and is manufactured by the New York Belting and Packing Co., Limited.

=The New York offices of the United States Rubber Reclaiming Works (Shelton, Conn.) have been removed from Fulton street to the handsome new Graham building, at the corner of Church and Duane streets.

=Mr. Frederick S. Minott, who had been manager of the insulated-wire department of the National India Rubber Co. (Bristol, R. I.) for several years, resigned that position on April 1, to become connected with the New York store of the Goodyear Rubber Co., of which his father is secretary. Mr. Minott's object in going into the factory at Bristol was to get a practical knowledge of rubber goods generally. Once there, however, he became interested in the electrical branch, and devoted such attention to it that this has become a very important department of the factory.

=Mr. Budd Doble, the incorporation of whose rubber-tire company was reported last month, writes to THE INDIA RUBBER WORLD that they soon will have something of interest for the inspection of the trade.

=Mr. Charles L. Johnson is understood to have tendered his resignation as director of sales of the United States Rubber Co., though no formal recognition of the fact has been made. The fact is that Mr. Johnson, a year ago, expressed a wish to retire from the office of secretary of the company—a position which at that time carried with it the direction of sales—but his wish was complied with only to the extent of dividing the duties of the position. Col. Samuel P. Colt was elected secretary and Mr. Johnson given the title of director of sales. Mr. Johnson has been at work without interruption since his graduation from Yale twenty-five years ago, and naturally is desirous of taking a rest so well earned, but his knowledge of the rubber trade has rendered him so valuable a man that it has been a difficult matter to divorce himself from business. It is probable that Mr. Johnson will sail for Europe shortly.

=The W. D. Walsh Rubber Co. have been incorporated at St. Louis, Mo., with $5000 capital, by L. C. Sanguinet, James M. Walsh, Walter D. Walsh, and T. H. Degnan.

=The Hood Rubber Co. began, during the last week in April, the erection of an addition to their factory building at East Watertown, Mass. The Hood rubbers, by the way, are to be handled in Chicago by W. H. Fargo & Co., an important firm in the shoe trade there.

=E. H. Cutler, some time selling-agent for the Woonsocket Rubber Co., who had been for several weeks in Europe, returned home about the middle of April.

=The Hon. E. S. Converse and Mrs. Converse have returned from their winter sojourn in the South to their home in Malden, Mass.

=William Martin & Sons (Chelsea, Mass.) began work in their new elastic-web factory on March 19. When in full running order they will employ fifty hands. This is the concern mentioned in THE INDIA RUBBER WORLD last November as about to remove from Canada, owing to the unfavorable condition of the trade there.

=The Norfolk Rubber Co. (Boston, Mass.), an incorporation under the laws of Maine, held their annual meeting on March 1 and filed a statement of their condition on April 7. The officers were reëlected: Charles E. Morse, president; T. E. Eustis, treasurer; and George B. Dodge, third director. The assets are: Machinery, $2637.64; fixtures, $477.46; cash and debts receivable, $19,465.49; merchandise and stock, $629.47; total, $28,610.06. The capital is $12,550, and the debts $8883.20.

=Mr. William A. De Long, vice president of the New York Commercial Co., is in Europe, having sailed from New York on April 21st.

=The business conducted heretofore by Henry A. Gould and the Gould Commercial Co., in India-rubber, dyestuffs, and camphor, will be continued by the Henry A. Gould Co., with main offices at No. 78 William street, New York and a branch at No. 32 Hawley street, Boston. The business dates from 1834.

=The New England selling-force of the Joseph Banigan Rubber Co. (Olneyville, R. I.), headed by C. L. Weaver & Co., of Boston, now includes George L. Harrington, for eastern Massachusetts, Rhode Island, and eastern Connecticut; Harry Woodward, for Connecticut and towns in New York, east of the Hudson river; W. E. Allen, Massachusetts and part of Vermont; W. G. Elliott, New Hampshire and a part of Vermont; Raynor K. Anderson, the retailers in Boston and its suburbs; and F. E. Dockerty, of Portland, the state of Maine. These are all experienced rubber salesmen, and most of them have been at work hitherto in the territory now assigned to them. The same is true of the selling force directed from the Chicago store of Edward R. Rice, namely: John H. Darrow and J. S. Field, in Michigan; Joseph M. Ruberstein, Wisconsin and upper Michigan; J. C. Currie, central and eastern Minnesota; E. D. Hutchinson, western Minnesota and North Dakota; H. A. Wright, Iowa and Missouri, including the city of St. Louis; Charles A. Bidwell, Indiana; H. R. Gallagher and Phil. A. Houck, Illinois. There is still another selling force, with headquarters at Mr. Rice's store in Buffalo, N. Y.

=The Brown Shoe Co. (St. Louis), though having an extensive rubber department, in the hands of an energetic manager, I. H. Sawyer, are reported to have dispensed with their special traveling salesmen for rubbers, for the reason that their general salesmen are considered sufficiently expert on rubber footwear to handle that line in connection with leather goods. It is estimated that this change in methods will result in a saving of $10,000 a year.

=The Pacific Rubber Co. (New York) have been making considerable additions to their plant at Elizabeth, N. J. Lately their boiler-room was rebuilt, and the old boiler replaced with one of much greater capacity. An extension to their main building is about completed, which will accommodate an important addition to their working force, and to the number of sewing-machines in use. The works have lately been run at full capacity, and an increased list of employés is contemplated. George B. Widner, selling-agent of the company, has recently made an extended business tour in the west. The company are devoting their attention to mackintoshes and rubber clothing, to the exclusion of cravenettes.

=Mr. Albert T. Holt, superintendent of the Diamond Rubber Co. (Akron, Ohio), recently made a visit to New York, reaching here on April 24.

=Mr. Joseph P. Earle, of Earle Brothers (New York), so long engaged in the crude-rubber trade, has retired to his former home at Wickford, R. I., in the hope that a few months' absence from the claims of business at his office may lead to the recovery of his health, which of late has not been of the best.

=The epidemic of typhoid fever among the employés of the Lambertville Rubber Co., mentioned in the last INDIA RUBBER WORLD, lasted until the twelfth death had occurred. A temporary hospital was equipped in St. Andrew's Hall, convenient to the mill, in charge of an experienced nurse, at the expense of the board of health.

=A respectable-looking man, giving the name of Charles F. Hamberger, was taken before the superior criminal court in Boston, recently, on a charge of stealing $400 worth of crude India-rubber from George A. Alden & Co. He was admitted to bail in $2500.

=Another rubber-man has been elected mayor of Trenton, N. J. This time it is Mr. Welling G. Sickel, vice-president of the United Rubber Co., extensive manufacturers of rubber goods. He was the republican candidate at the election on April 13, and received 6289 votes, against 4154 votes for the democratic candidate, and 1748 for the "citizen's league" candidate. Mr. Sickel has been highly successful as a business man, and it is predicted that he will make a good record in public life.

=While President Banigan and Secretary Ballou, of the Joseph Banigan Rubber Co., have offices in the Banigan building, at Providence, R. I., the offices of the company are at the factory, in Olneyville. Mr. Ballou is still secretary of the American Wringer Co., who also have offices in the Banigan building.

=The factory building at Chelsea, Mass., occupied formerly by the Chelsea Wire Fabric Co., was secured some time ago by the Consolidated Rubber Works, of Reading, Mass. The factory of the latter, in turn, known also as the old Chauncey rubber plant, has been rented by the L. C. Chase & Co., rubber-tire manufacturers, of Boston.

=The Boston Rubber Store has recently been opened at No. 413 Washington avenue, Boston. There is carried a large retail stock of mackintoshes, rubber clothing and boots and shoes, rubber sundries and umbrellas. The firm will make a specialty of a good line of bicycles.

=P. Carter Bell & Co. (No. 150 Nassau street, New York), are distributing samples of a new "white substitute," for use in the manufacture of druggists' sundries and other fine rubber specialties. Manufacturers will be interested in the formula which accompanies these samples.

=Charles B. Case has been appointed temporary receiver for the Eastern Rubber Co. (Trenton, N. J.), and an injunction issued restraining the company from doing business.

=The La Crosse Rubber Mills Co. (La Crosse, Wis.) began operations about the middle of April. Their production for the present will be confined to the manufacture of men's and women's mackintoshes, from the manipulation of the crude rubber and proofing cloth to the turning out of finished garments. The local newspapers record the arrival of a lot of Bolivian rubber for the new factory.

=We have a report from Kansas City (Mo.) of the appearance in the market there of rubber hose manufactured in San Francisco.

=An agent of the Spaulding & Pepper Co. (Chicopee Falls Mass.) recently visited Bristol, R. I., to secure trained rubber-workers for their bicycle-tire factory. He employed twenty-three workmen—mostly cutters and calender-hands—upon the assurance of steady work and good pay.

=The Peoria Rubber and Manufacturing Co. (Peoria, Ill.) are reported to be running full-handed and overtime, filling orders for tires. Fred Patee has resigned from the position of assistant manager and sales manager of the company, to devote more time to his official duties in the League of American Wheelmen. It is reported, however, that he will retain his holdings of the company's shares.

=The factories of the Boston Rubber Shoe Co., which had been running full time, with 3000 employés, were closed for the spring vacation on April 23 and re-opened on May 5, making a shutdown of only nine working days. Last spring the shutdown lasted four weeks—from April 9 to May 7.

=Recent visitors to the offices of THE INDIA RUBBER WORLD were Mr. George T. Allen, manager of the boot and shoe department of the Day Rubber Co. (St. Louis); Mr. R. M. Howison, of Sgal & Co. (Boston); and Mr. Frank A. Krim, lately of Cleve & Krim (Boston). The address of the latter is now at No. 154 Pearl street, New York, where he is engaged in the business of introducing American-made golf-balls.

THE "A. M. W." WATERPROOF DRESS-FACING.

THE INDIA RUBBER WORLD had occasion, some time ago, to notice two patents granted to Aaron M. Weber, of Oshkosh, Wis., for a combined dress-facing and skirt-binding. The dress-facing is made of waterproofed cloth cut bias, having a folded strip or binding secured to the outer edge of the facing so that its free edges are flush with the lower edge of the same. A narrow tape is also provided at the upper and inner edge of the facing. These goods are now being placed upon the market by the Weber Manufacturing Co., organized for this purpose. Their factory is located at Oshkosh, and branch offices and salesrooms have been opened in New York, Chicago, Kansas City, and San Francisco. THE INDIA RUBBER WORLD is informed that the company have had no difficulty in disposing of the complete output of the factory, running at full capacity. They are manufacturing four or five different styles of waterproof dress-facings, protected by basic patents, which are broad and cover the minutest details. Patents have been granted in Germany, Canada, England, France, Belgium, and Austria Hungary, and applications are pending in several other countries. The principles involved in this manufacture have been applied to a facing for bicycle-skirts which the company consider superior to anything else yet placed upon the market. The qualities which distinguish these goods are: (1) they are a facing as well as a binding; (2) they can be washed without removing them and without injury to the skirt; (3) they are durable, often outwearing the skirt; (4) they do not shrink or crinkle when exposed to dampness; (5) they are neat and economical.

REVIEW OF THE INDIA-RUBBER MARKET.

THERE is a fair trade in crude India-rubber, with stronger prices quoted. The strong speculative market abroad has kept values firm since our last report. The figures given below indicate advances on all grades of rubber in the American market over the prices last given, with the exception of the lower grades of Africans. The tendency has been steadily upward during the month, and there are now no indications of a change to the opposite direction. The situation here is due in part to increased demands from consumers in America—where greater activity is to be noted in most lines of the industry—one indication of which is to be found in the increased imports during the month of Pará grades from Europe.

The latest quotations in the New York market are:

PARÁ.			CENTRALS.		
Islands, fine, new	83½	@	Esmeralda, sausage	52½	@
Islands, fine, old	84	@	Guayaquil, strip	40	@46½
Islands, coarse, new	47	@48	Nicaragua, scrap	50	@52
Islands, coarse, old	none here		Nicaragua, sheet	none here	
Upriver, fine, new	87	@88	Mangabeira, sheet	40	@
Upriver, fine, old	89	@90	**AFRICAN.**		
Upriver, coarse, new	58	@	Tongues	38½	
Upriver, coarse, old	60	@	Sierra Leone	25	@52
Caucho (Peruvian) sheet	44	@45	Benguela	50	@51
Caucho (Peruvian) strip	47	@48	Congo Ball	40	@42
Caucho (Peruvian) ball	52	@	Cameroon Ball	40	@41
			Flake and Lumps	25	@27
			Accra Flake	18	@20
			Accra Buttons	51	@
			Accra Strips	55	@58
			Lagos Buttons	47	@
			Lagos Strips	47	@
			Liberian Flake	28	@
			Madagascar, pinky	60	@
			Madagascar, black	39	@42
			Mozambique, red ball		@
			EAST INDIAN.		
			Assam	44	@62
			Borneo	26	@42
			GUTTA-PERCHA.		
			Fine grade	1.35	
			Medium	1.20	
			Hard white	90	
			Lower sorts	50	
			Balata		

Late Pará cables quote:

	Per Kilo		Per Kilo.
Islands, fine	8 $500	Upriver, fine	9 $600
Islands, coarse	4 $300	Upriver, coarse	5 $100

Exchange 7 1/16 *d.*

NEW YORK PRICES FOR PARÁ RUBBER IN APRIL.

	1897.	1896.	1895.
Upriver fine	84 @88	76 @82	73 @74
Upriver coarse	54 @58	54 @57	53 @55
Island fine	82 @84	73½@81	71 @72
Island coarse	45 @48	44 @47	46½@47½
Cameta coarse	55½@57	50 @54	51½@53

In respect to the financial situation, Albert B. Beers, broker in India-rubber and commercial paper (No. 58 William street, New York), advises us as follows:

"Conditions of the money market as regards commercial paper have remained unchanged during April, there being a fair demand, and the best rubber names selling at 4½@5 per cent., and those not so well known at 5½@6 per cent., and the prospect now is for a continuance of these conditions."

The statistical showing given below indicates the position of the Pará rubber supply throughout the world, including a comparison with former years. Receipts at Pará continue larger for the crop year than for any corresponding period in the past. As this report is being written the *Theresina* is due in New York from Pará.

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilograms:

	Fine and Medium.	Coarse.	Totals.	Totals. 1896.	Totals. 1895.
Stock, March 31	423	91 =	514	388	627
Arrivals, April	519	205 =	724	1004	905
Aggregating	942	296 =	1238	1392	1532
Deliveries, April	723	253 =	976	1060	1070
Stock, April 30	219	43 =	262	332	462

	1897.	1896.	1895.
Stock in England, April 30	1545	1190	1396
Deliveries in England, April	775	825	575
Pará receipts, April	1380	1020	840
Stock in Pará, April 30	390	165	365
World's supply, April 30 (excluding Caucho)	3237	2693	3173
Pará receipts since July 1	20,340	19,130	17,845

THE ANTWERP RUBBER MARKET.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since the beginning of this month the sales of Congo rubber amount to 114 tons, of which about 100 tons were sold at public tender on April 22. The prices show a rise of fully 3 per cent. in the average on broker's estimation, based on the last sales in March. For the finer grades, even, the rise is in some instances greater than 3 per cent. For instance, a lot of 21½ tons of Lopori (Upper Congo) balls of fine quality sold at 6.12½ francs against the estimation of 6.40 francs. We may mention besides: 10 tons Equateur balls of fine quality at 6.45 francs (estimation 6.30 francs); 4½ tons black Kassaí at 5.52½ francs (estim. 5.35); 10¾ tons Upper Congo Bussira balls at 6.30 francs (estimation 6.10). A small lot of 1½ tons red Kassaí of fine quality brought 7.27½ francs (estimation 7.20 francs).

The actual stock is reduced to 23 tons of sundry sorts. Fresh arrivals are expected by the steamer *Leopoldville*, from the Congo towards the end of this month. We append a statistical table, showing arrivals, sales, and stock since January 1 for the last five years.

ANTWERP RUBBER STATISTICS, END OF MARCH.

[*Weights expressed in Kilograms.*]

	1893.	1894.	1895.	1896.	1897.
Stock, February 28	1,297	1,954	63,892	48,308	185,743
Arrivals, March	10,753	6,217	62,723	63,352	108,514
Total	12,050	8,171	126,615	111,660	294,257
Sales, March	3,289	900	41,103	57,664	176,447
Stock, March 31	8,761	7,271	85,512	53,996	117,810
Arrived since Jan. 1	25,024	21,988	103,093	155,205	318,783
Sales since Jan. 1	20,141	22,906	103,093	190,063	340,601

C. SCHMID & CO.

Antwerp, April 23, 1897.

IMPORTS FROM PARA.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

April 16.—By the steamer *Hilary*, from Manáos and Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co	364,500	53,700	105,500	10,000=	533,700
Boston Rubber Shoe Co.	50,000	18,600	38,500	80,500=	187,600
Reimers & Meyer	86,000	13,200	85,500	=	184,700
Joseph Banigan	68,900	11,700	33,300	=	113,900
Sears & Co	15,400	8,600	20,500	=	44,500
Kunhardt & Co.	17,100	5,000	500	=	22,600
Shipton Green	13,500	1,800	5,200	1,100=	21,600

Lawrence Johnson & Co..	15,200	1,100	3,200	.....=	19,500
Manáos Elec. Light Co..	10,400	1,100	4,800	.....=	16 300
Albert T. Morse.....	8,200	700	2,200	.... =	11,100
P. Lima	8,600	.....	4,100	....=	12,700
W. Loaiza & Co..... ...	4,100	1,500	...	.....=	5,600
George G. Cowl.....	3.500	400	1,400	.....=	5.300
W. H. Crossman & Bro..	2,000	1,900	1,200	...=	5,100
Otto G. Mayer & Co.....	.....	... .	3,600	.....=	3,600
Totals.....	667,400	119,300	309,500	91,600=	1,187,800

May 1.—By the steamer *Dominic*, from Pará :

New York Commercial Co	116,700	29,200	34,700	3.400=	184,000
Reimers & Meyer.....	25,000	9.700	17,000	21,000=	72,700
Boston Rubber Shoe Co...	26,800	8,900	36,100	.....=	71,800
Flint & Co.....	39,200	8,700	14,300	.....=	62,200
P. Lima.....	5,900	. ...	3,200	.....=	9,100
Otto G. Mayer & Co.....	.....	.....	7,200	.....=	7,200
Sears & Co...	3,200	300	3,000	.....=	6.500
Lawrence Johnson & Co.	4,500	.....	3.300	.....=	7,800
Totals.....	218,300	56,800	118,800	24,400=	418,300

	1897.	1896.	1895.
January Imports from Pará	1,393,500	2,718,300	2,869,500
February Imports.....	3,684,300	1,945,900	2,274,400
March Imports....	2,436,600	2,786,300	3,611,700
April Imports.....	1,557,600	1,941,500	2,156,400

PARA RUBBER VIA EUROPE.

April 12.—By the steamer *Etruria*, from Liverpool :

Reimers & Meyer (fine).....	11,000

April 19.—By the steamer *Shenandoah*, from Liverpool :

George A. Alden & Co. (fine).....	8,900

April 20.—By the steamer *Nomadic*, from Liverpool :

George A. Alden & Co. (fine and medium).....	46,000
Albert T. Morse (fine).....	7,100

April 24.—By the steamer *Britannic*, from Liverpool :

Reimers & Meyer (fine).....	24,000

April 26.—By the steamer *Georgic*, from Liverpool :

George A. Alden & Co. (fine and medium).....	67,000

April 28.—By the steamer *Cufic*, from Liverpool :

George A. Alden & Co. (fine and medium)	45,000

April 29.—By the steamer *Servia*, from Liverpool :

George A. Alden & Co. (fine).....	15,000

May 1.—By the steamer *Lucania*, from Liverpool :

Reimers & Meyer (fine and medium).....	63,000
Reimers & Meyer (coarse).....	9,000
George A. Alden & Co. (fine).....	5,000

May 3.—By the steamer *Christiania*, from Havre :

Reimers & Meyer (fine).....	27,500
Reimers & Meyer (caucho)...	27,500
Otto G. Mayer & Co. (fine).....	15,000
Otto G. Mayer & Co. (caucho).....	25,000

May 3.—By the steamer *Bovic*, from Liverpool :

Sgal & Co. (coarse).....	5,000

OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during April, 1897, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also arrivals at New York of African and East Indian sorts :

CENTRALS.

	POUNDS.
APRIL 1.—By the *Altianca*=Colon :	
H. Feltman & Co....	7,300
Frame, Alston & Co....	3.900
Flint, Eddy & Co.....	3.557
I. Brandon & Bros	3,389
Munoz & Espriella....	2.900
Dumarest & Co....	2,467
Piza, Nephews & Co	1,588
W. Loaiza & Co	1,347
Geo. R. Cottrell & Co.....	1,300
Roldan & Van Sickle	700
A. Santos & Co.....	667
Singer Manufacturing Co	500
J. Aparicio & Co.....	321
Andreas & Co.....	250
A. N. Rotholz.....	220
W. R. Grace & Co.....	104
Total....	30,510
APRIL 5.—By the *Pennsylvania*=Hamburg :	
Reimers & Meyer.....	2,800
APRIL 6.—By the *Alleghany*=Cartagena :	
Kunhardt & Co.....	1,200
H. Feltman & Co.....	1,000
G. Amsinck & Co....	500
A. N. Rotholz.....	400
Eggers & Heinlein	300
For Hull, England	500
Total	3,900
APRIL 7.—By the *Paraense*=Maranham :	
W. H. Crossman & Bro	1,900
G. Amsinck & Co.....	600
Total....	2,500
APRIL 8.—By the *Seneca*=Mexico :	
Thebaud Bros.....	500
For Glasgow.....	500
E. Steiger & Co.....	200
H. Marquardt & Co.....	300
Total..	1,500
APRIL 9.—By the *El Monte*=New Orleans :	
Albert T. Morse.....	8,000
APRIL 12.—By the *Creole*=New Orleans :	
Albert T. Morse.....	8,500
APRIL 13.—By the *Alene*=Greytown :	
G. Amsinck & Co.....	4,000
Andreas & Co	2,500
For London.....	3,000
A. D. Straus & Co	100
Total.	9,600
APRIL 14.—By the *Yucatan*=Mexico :	
Eggers & Heinlein....	1,500
E. Steiger & Co.....	1,000
Thebaud Brothers	700
E. N. Tibbals	200
J. W. Wilson & Co	200
H. Marquardt & Co.....	200
Total	3,800
APRIL 12.—By the *Valencia*=Colon :	
Roldan & Van Sickle.....	7,208
I. Brandon & Bros..... ..	6,595
A. Amsinck & Co	4,000
W. R. Grace & Co.....	3,862
Munoz & Espriella.....	3 000
R. F. Cornwell.....	2,153
A. Santos & Co.....	2,074
Flint, Eddy & Co.....	1,984
A. P. Strout.....	1,719
Dumarest & Co.....	1,707
A. M. Capen's Sons.....	1,454
J. Aparicio & Co	1,200
G. R. Cottrell & Co.....	1,083
D. A. De Lima & Co.....	550
Samper & Jimenes	225
Lanman & Kemp.....	153
Total.....	36,967
APRIL 14.—By the *Patria*=Hamburg :	
Reimers & Meyer.....	3,300
APRIL 19.—By the *Allai*=Savanilla :	
E. Cortes & Co., London.....	15,000
D. A. De Lima & Co	3,000
H. W. Peabody & Co....	300
Total....	18.300
APRIL 20.—By the *Hudson*=New Orleans :	
Albert T. Morse.	2,000
APRIL 21.—By the *Seguranca*=Mexico :	
H. Marquardt & Co	1,500
E. Steiger & Co.....	2,000
Fred Probst & Co	200
L. Monjo, Jr., & Co	200
Thebaud Bros.....	200
H. Feltman & Co....	1,000
Total	4,600
APRIL 22.—By the *Finance*=Colon :	
H. Feltman & Co....	7,700
New York Commercial Co.....	4,400
Roldan & Van Sickle....	4,290
A. P. Strout	4,155
W. R. Grace & Co	1,929
Dumarest & Co.....	1,884
G. Amsinck & Co	1,433
I. Brandon & Bros	1,200
Frame, Alston & Co.....	1,200
Piza, Nephews & Co	1,124
J. M. Ceballos & Co.....	617
Fred Probst & Co	617
Andreas & Co.....	546
Munoz & Espriella..	373
A. N Rotholz	200
Total.....	31,728
APRIL 23.—By the *El Paso*=New Orleans :	
Albert T. Morse.....	4,500
APRIL 24.—By the *Britannic*=Liverpool :	
Reimers & Meyer.....	2,000
APRIL 26.—By the *Georgic*=Liverpool :	
Reimers & Meyer..	15.000
APRIL 26.—By the *Louisiana*=New Orleans :	
Albert T. Morse.....	9,000
APRIL 28.—By the *Adirondack*=Greytown :	
G. Amsinck & Co	6,500
A. P. Strout.....	5.500
Andreas & Co	5,000
H. Feltman & Co.....	500
Ellinger Bros.....	100
E. Cortez & Co., London.....	10,000
Total	27,600
APRIL 28.—By the *Berlin*=Southampton :	
Reimers & Meyer.....	2,800
APRIL 28.—By the *Coleridge*=Bahia :	
Reimers & Meyer.....	14,000
Total Centrals for April	242,605
Total for March.....	215.671
Total for February.....	163,558
Total for January.....	255.082

AFRICANS.

	POUNDS.
APRIL 1.—By the *Majestic*=Liverpool :	
George A. Alden & Co.....	30,000
Sgal & Co	34.500
Total.....	64,500
APRIL 1.—By the *Noordland*=Antwerp :	
Reimers & Meyer.....	8,700
Albert T. Morse.....	8,800
Total.....	17,500

APRIL 3.—By the *Lucania*=Liverpool:

Reimers & Meyer	45,900
William A. Brown & Co	11,000
Total	56,900

APRIL 5.—By the *Pennsylvania*=Hamburg:

George A. Alden & Co	11,300
Albert T. Morse	800
Total	12,100

APRIL 7.—By the *Tauric*=Liverpool:

George A. Alden & Co	22,700
Sgal & Co	18,000
Total	40,700

APRIL 7.—By the *Friesland*=Antwerp:

Sgal & Co	2,200

APRIL 9.—By the *Germanic*=Liverpool:

George A. Alden & Co	12,500
Sgal & Co	12,200
Total	24,700

APRIL 10.—By the *St. Paul*=Southampton:

Reimers & Meyer	12,800

APRIL 12.—By the *Etruria*=Liverpool:

Reimers & Meyer	18,500

APRIL 14.—By the *Patria*=Hamburg:

Reimers & Meyer	31,000
Windmuller & Roelker	5,800
Total	36,800

APRIL 16.—By the *Cevenum*=Lisbon:

George A. Alden & Co	106,400

APRIL 16.—By the *Europe*=London:

Otto G. Mayer & Co	3,800

APRIL 17.—By the *Megantic*=London:

George A. Alden & Co	7,700

APRIL 19.—By the *New York*=Southampton:

Reimers & Meyer	30,100
George A. Alden & Co	2,500
Total	32,600

APRIL 19.—By the *Shenandoah*=Liverpool:

Reimers & Meyer	30,400
Sgal & Co	23,500
Albert T. Morse	6,500
George A. Alden & Co	4,000
Otto G. Mayer & Co	1,800
Total	66,200

APRIL 19.—By the *Phœnicia*=Hamburg:

Reimers & Meyer	10,500
George A. Alden & Co	2,100
Total	12,600

APRIL 20.—By the *Manitoba*=London:

Sgal & Co	4,500

APRIL 20.—By the *Nomadic*=Liverpool:

George A. Alden & Co	22,000
Sgal & Co	20,600
Total	42,600

APRIL 22.—By the *Peninsular*=Lisbon:

George A. Alden & Co	124,200

APRIL 24.—By the *Britannic*=Liverpool:

Sgal & Co	29,400
Reimers & Meyer	10,000
Total	39,400

APRIL 24.—By the *Persia*=Hamburg:

Reimers & Meyer	4,500
Albert T. Morse	3,500
Total	8,000

APRIL 24.—By the *Umbria*=Liverpool:

Sgal & Co	8,000
William A. Brown & Co	2,500
Total	10,500

APRIL 26.—By the *La Gascogne*=Havre:

Otto G. Mayer & Co	3,500

APRIL 26.—By the *Georgic*=Liverpool:

Reimers & Meyer	30,000
Otto G. Mayer & Co	11,000
Wm. A. Brown & C	5,000
Total	46,000

APRIL 28.—By the *Berlin*=Southampton:

Reimers & Meyer	45,000

APRIL 29.—By the *Majestic*=Liverpool:

Sgal & Co	18,500

APRIL 29.—By the *British King*=Antwerp:

Otto G. Mayer & Co	20,000
Albert T. Morse	15,000
Total	35,000

Total Africans for April	892,700
Total for March	816,311
Total for February	737,100
Total for January	699,000

EAST INDIAN.

APRIL 10.—By the *St. Paul*=Southampton:

	POUNDS.
Reimers & Meyer	2,500

APRIL 14.—By the *Port Adelaide*=Singapore:

Reimers & Meyer—(Pontianak)	6,500
Windmuller & Roelker	9,600
Total	26,400

APRIL 19.—By the *New York*=Southampton:

Reimers & Meyer	15,000

APRIL 19.—By the *Phœnicia*=Hamburg:

Robert Soltau & Co	15,000

APRIL 24.—By the *Persia*=Hamburg:

Robert Soltau & Co	4,600

APRIL 26.—By the *Georgic*=Liverpool:

George A. Alden & Co	3,000

APRIL 28.—By the *Berlin*=Southampton:

Reimers & Meyer	11,000

APRIL 29.—By the *Mississippi*=London:

To Order	5,000

APRIL 30.—By the *America*=London:

Reimers & Meyer	4,000

Total East Indian for April	86,500
Total for March	58,100
Total for February	80,600
Total for January	178,000

RECAPITULATION.

	POUNDS.
Pará—direct imports	1,557,600
Pará—via Europe	401,000
Centrals	242,605
Africans	892,700
East Indian	86,500
Total at New York for April	3,180,405
Total for March	3,563,557
Total for February	4,719,158
Total for January	2,668,182

BOSTON ARRIVALS.

APRIL 3.—By the *Kansas*=Liverpool:

	POUNDS.
Sgal & Co.—Coarse Pará	5,000
Sgal & Co.—Africans	10,689

APRIL 6.—By the *Sylvania*=Liverpool:

Sgal & Co.—Africans	1,783

APRIL 9.—By the *British Queen*=London:

George A. Alden & Co.—East Indian	2,803

APRIL 14.—By the *Michigan*=Liverpool:

George A. Alden & Co.—Africans	2,006

APRIL 18.—By the *Cephalonia*=Liverpool:

Sgal & Co.—Africans	2,289

APRIL 18.—By the *Canada*=Liverpool:

Reimers & Meyer—Coarse Pará	42,000
Reimers & Meyer—Caucho	36,678

APRIL 20.—By the *Sagamore*=Liverpool:

George A. Alden & Co.—Africans	6,460

APRIL 25.—By the *Ottoman*=Liverpool:

George A. Alden & Co.—Africans	21,150
Total at Boston for April	130,828

NEW ORLEANS.

APRIL.

	POUNDS.	VALUE.
From British Honduras	2,318	$ 475
From Nicaragua	45,419	17,110
Total for April	47,737	$17,585

MONTHLY EXPORTS OF INDIA-RUBBER FROM PARA.

[NOTE.—The figures denote weights in Kilograms.]

MONTHS.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
March, 1897	391,272	77,784	291,394	108,481	868,931	510,747	105,264	211,113	73,672	900,796	1,769,727
February	970,842	239,289	410,776	82,506	1,703,413	849,576	170,273	303,424	86,942	1,410,215	3,113,628
January	525,167	135,758	263,243	140,786	1,064,954	865,941	195,941	334,960	59,648	1,456,490	2,521,444
December, 1896	610,834	160,540	245,863	30,748	1,047,985	1,053,749	202,388	387,083	119,799	1,763,019	2,811,004
November	618,969	157,617	316,117	11,033	1,103,736	689,706	161,835	269,406	22,928	1,143,875	2,247,611
October	824,945	159,242	229,858	41,209	1,255,254	433,403	79,221	262,319	5,280	780,223	2,035,477
September	623,393	134,616	206,244	107,886	1,072,139	336,074	67,303	178,755	10,393	592,525	1,664,664
August	131,233	27,295	111,077	40,462	310,517	505,308	86,583	209,855	49,956	851,702	1,162,219
July	116,346	33,338	106,048	34,653	290 385	270,233	35,210	125,824	93,293	524,560	814.945
Total for crop year	4,813.001	1,125,479	2,180,620	597.764	8,716,864	5.515,501	1,104,018	2,282,739	521,911	9,423,465	18,140,329

Total in Pounds: To United States, 19,177,100; to Europe, 20,731,623; total, 39,908,100.
Percentages: To United States, 48; to Europe, 50; total, 100.